Ehsan Abadi

List of Publications by Year
in descending order

53 papers	491 citations	933447 10 h-index	752698 20 g-index
53 all docs	53 docs citations	53 times ranked	481 citing authors

#	Article	IF	Citations
1	Virtual clinical trials in medical imaging: a review. Journal of Medical Imaging, 2020, 7, 1.	1.5	93
2	The Effect of Contrast Material on Radiation Dose at CT: Part II. A Systematic Evaluation across 58 Patient Models. Radiology, 2017, 283, 749-757.	7.3	59
3	DukeSim: A Realistic, Rapid, and Scanner-Specific Simulation Framework in Computed Tomography. IEEE Transactions on Medical Imaging, 2019, 38, 1457-1465.	8.9	49
4	Modeling Lung Architecture in the XCAT Series of Phantoms: Physiologically Based Airways, Arteries and Veins. IEEE Transactions on Medical Imaging, 2018, 37, 693-702.	8.9	44
5	Patientâ€specific quantification of image quality: An automated technique for measuring the distribution of organ Hounsfield units in clinical chest <scp>CT</scp> images. Medical Physics, 2017, 44, 4736-4746.	3.0	33
6	Modeling â€œTexturedâ€•Bones in Virtual Human Phantoms. IEEE Transactions on Radiation and Plasma Medical Sciences, 2019, 3, 47-53.	3.7	29
7	Validation of algorithmic CT image quality metrics with preferences of radiologists. Medical Physics, 2019, 46, 4837-4846.	3.0	18
8	A real-time Monte Carlo tool for individualized dose estimations in clinical CT. Physics in Medicine and Biology, 2019, 64, 215020.	3.0	18
9	<i>i</i>Phantom: A Framework for Automated Creation of Individualized Computational Phantoms and Its Application to CT Organ Dosimetry. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 3061-3072.	6.3	15
10	Development of a scanner-specific simulation framework for photon-counting computed tomography. Biomedical Physics and Engineering Express, 2019, 5, 055008.	1.2	14
11	A scanner-specific framework for simulating CT images with tube current modulation. Physics in Medicine and Biology, 2021, 66, 185010.	3.0	10
12	Virtual Imaging Trials for Coronavirus Disease (COVID-19). American Journal of Roentgenology, 2021, 216, 362-368.	2.2	9
13	Systematic analysis of bias and variability of texture measurements in computed tomography. Journal of Medical Imaging, 2019, 6, 1.	1.5	8
14	Airways, vasculature, and interstitial tissue: anatomically informed computational modeling of human lungs for virtual clinical trials. Proceedings of SPIE, 2017, , .	0.8	7
15	A GPU-accelerated framework for rapid estimation of scanner-specific scatter in CT for virtual imaging trials. Physics in Medicine and Biology, 2021, 66, 075004.	3.0	7
16	Multi-organ segmentation in clinical-computed tomography for patient-specific image quality and dose metrology. , 2019, , .		7
17	Anatomically and physiologically informed computational model of hepatic contrast perfusion for virtual imaging trials. Medical Physics, 2022, 49, 2938-2951.	3.0	7
18	From patient-informed to patient-specific organ dose estimation in clinical computed tomography. , 2018, , .		6

#	Article	IF	Citations
19	A rapid GPU-based Monte-Carlo simulation tool for individualized dose estimations in CT. , 2018, , .		6
20	Assessment of pleural invasion and adhesion of lung tumors with dynamic chest radiography: A virtual clinical imaging study. Medical Physics, 2021, 48, 1616-1623.	3.0	5
21	A comparison of COVID-19 and imaging radiation risk in clinical patient populations. Journal of Radiological Protection, 2020, , .	1.1	5
22	Development and clinical applications of a virtual imaging framework for optimizing photon-counting CT. , 2022, , .		5
23	COPD quantifications via CT imaging: ascertaining the effects of acquisition protocol using virtual imaging trial. , 2021, , .		4
24	How reliable are texture measurements?. , 2018, , .		4
25	Development and validation of an automated methodology to assess perceptual in vivo noise texture in liver CT. Journal of Medical Imaging, 2021, 8, 052113.	1.5	4
26	Development of a fast, voxel-based, and scanner-specific CT simulator for image-quality-based virtual clinical trials. , 2018, , .		4
27	Virtual clinical trial in action: textured XCAT phantoms and scanner-specific CT simulator to characterize noise across CT reconstruction algorithms. , 2018, , .		3
28	Anatomically- and computationally-informed hepatic contrast perfusion simulations for use in virtual clinical trials. , 2019, , .		3
29	Photon-counting CT versus conventional CT for COPD quantifications: intra-scanner optimization and inter-scanner assessments using virtual imaging trials. , 2022, 12031, .		3
30	Realistic lesion simulation: application of hyperelastic deformation to lesion-local environment in lung CT. , 2018, , .		2
31	Virtual clinical trial for quantifying the effects of beam collimation and pitch on image quality in computed tomography. Journal of Medical Imaging, 2020, 7, 1.	1.5	2
32	Impact of energy threshold on material quantification of contrast agents in photon-counting CT. , 2019, , .		1
33	Patient-informed and physiology-based modelling of contrast dynamics in cross-sectional imaging. , 2019, , .		1
34	A comprehensive GPU-based framework for scatter estimation in single source, dual source, and photon-counting CT. , 2019, , .		1
35	Dynamic chest radiography for pulmonary function diagnosis: A validation study using 4D extended cardiac-torso (XCAT) phantom. , 2019, , .		1
36	Modeling Patient-Informed Liver Contrast Perfusion in Contrast-enhanced Computed Tomography. Journal of Computer Assisted Tomography, 2020, 44, 882-886.	0.9	1

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37	Deep learning classification of COVID-19 in chest radiographs: performance and influence of supplemental training. Journal of Medical Imaging, 2021, 8, 064501.	1.5	1
38	Scanner-specific validation of a CT simulator using a COPD-emulated anthropomorphic phantom. , 2022, 12031, .		1
39	Cardiac CT reconstruction for vendor-neutral virtual imaging trials. , 2022, , .		1
40	Prediction of glioblastoma multiforme response to bevacizumab treatment using diffusion and perfusion imaging. , 2015, , .		0
41	A technique for multi-dimensional optimization of radiation dose, contrast dose, and image quality in CT imaging. , 2016, , .		0
42	Effect of Iodine-based Contrast Material on Radiation Dose at CT. Radiology, 2017, 285, 1053-1054.	7.3	0
43	Correction for Systematic Bias in Radiomics Measurements Due to Variation in Imaging Protocols. Academic Radiology, 2021, , .	2.5	0
44	Trade-off between spatial details and motion artifact in multi-detector CT: A virtual clinical trial with 4D textured human models. , 2019, , .		0
45	A framework for realistic virtual clinical trials in photon counting computed tomography. , 2019, , .		0
46	Development, validation, and relevance of in vivo low-contrast task transfer function to estimate detectability in clinical CT images. Medical Physics, 2021, 48, 7698.	3.0	0
47	Corrections to "*i*Phantom: A Framework for Automated Creation of Individualized Computational Phantoms and its Application to CT Organ Dosimetry"[Aug 21 3061-3072]. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 478-478.	6.3	0
48	Quantitative analysis of changes in lung density by dynamic chest radiography in association with CT values: a virtual imaging study and initial clinical corroboration. Radiological Physics and Technology, 2022, 15, 45.	1.9	0
49	Optimization of imaging parameters of an investigational photon-counting CT prototype for lung lesion radiomics. , 2022, , .		0
50	Inter- and intra-scan variability for lung imaging quantifications via CT. , 2022, 12031, .		0
51	A truth-based primal-dual learning approach to reconstruct CT images utilizing the virtual imaging trial platform. , 2022, 12031, .		0
52	Virtual versus reality: external validation of COVID-19 classifiers using XCAT phantoms for chest computed tomography. , 2022, , .		0
53	Quality or quantity: toward a unified approach for multi-organ segmentation in body CT. , 2022, , .		0