

Cristian Badea

List of Publications by Year in descending order

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148
papers

3,877
citations

145106

33
h-index

156644

58
g-index

154
all docs

154
docs citations

154
times ranked

4571
citing authors

#	ARTICLE	IF	CITATIONS
1	Photon Counting CT and Radiomic Analysis Enables Differentiation of Tumors Based on Lymphocyte Burden. <i>Tomography</i> , 2022, 8, 740-753.	0.8	6
2	Photon counting micro-CT for imaging Cisplatin. , 2022, , .		0
3	Spectral micro-CT and radiomic analysis for classification of tumors based on lymphocytic burden in cancer therapy studies. , 2022, , .		1
4	Volumetric, dual-domain x-ray CT reconstruction with deep learning. , 2022, , .		0
5	Anatomical and functional cardiac PCCT imaging pipeline for characterization of Apolipoprotein E mouse models. , 2022, , .		0
6	Cardiac CT reconstruction for vendor-neutral virtual imaging trials. , 2022, , .		1
7	Material decomposition from photon-counting CT using a convolutional neural network and energy-integrating CT training labels. <i>Physics in Medicine and Biology</i> , 2022, 67, 155003.	1.6	6
8	Microcephaly with altered cortical layering in GIT1 deficiency revealed by quantitative neuroimaging. <i>Magnetic Resonance Imaging</i> , 2021, 76, 26-38.	1.0	4
9	Principles of Micro X-ray Computed Tomography. , 2021, , 47-64.		0
10	A constrained Bregman framework for unsupervised convolutional denoising of multi-channel x-ray CT data. , 2021, , .		1
11	Deep learning based spectral distortion correction and decomposition for photon counting CT using calibration provided by an energy integrated detector. , 2021, , .		7
12	Towards deep learning segmentation of lung nodules using micro-CT data. , 2021, , .		0
13	Characterization of cardiovascular injury in mice following partial-heart irradiation with clinically relevant dose and fractionation. <i>Radiotherapy and Oncology</i> , 2021, 157, 155-162.	0.3	13
14	Ex Vivo MR Histology and Cytometric Feature Mapping Connect Three-dimensional in Vivo MR Images to Two-dimensional Histopathologic Images of Murine Sarcomas. <i>Radiology Imaging Cancer</i> , 2021, 3, e200103.	0.7	5
15	Evaluating renal lesions using deep-learning based extension of dual-energy FoV in dual-source CTâ€™A retrospective pilot study. <i>European Journal of Radiology</i> , 2021, 139, 109734.	1.2	2
16	Detection of Lung Nodules in Micro-CT Imaging Using Deep Learning. <i>Tomography</i> , 2021, 7, 358-372.	0.8	11
17	Advances in micro-CT imaging of small animals. <i>Physica Medica</i> , 2021, 88, 175-192.	0.4	35
18	Deep learning based spectral extrapolation for dualâ€™source, dualâ€™energy xâ€™ray computed tomography. <i>Medical Physics</i> , 2020, 47, 4150-4163.	1.6	9

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19	The impact of respiratory gating on improving volume measurement of murine lung tumors in micro-CT imaging. PLoS ONE, 2020, 15, e0225019.	1.1	11
20	Fast spectral x-ray CT reconstruction with data-adaptive, convolutional regularization. , 2020, , .		1
21	MRI-Based Deep Learning Segmentation and Radiomics of Sarcoma in Mice. Tomography, 2020, 6, 23-33.	0.8	25
22	Co-Clinical Imaging Resource Program (CIRP): Bridging the Translational Divide to Advance Precision Medicine. Tomography, 2020, 6, 273-287.	0.8	11
23	MRI-based radiomics of sarcomas in the preclinical arm of a co-clinical trial. , 2020, , .		0
24	Development of a spectral micro-CT system using a photon counting detector with anti-coincidence corrections. , 2020, , .		1
25	A spectral CT study on iodine augmentation of radiation therapy and its potential for combination with chemotherapy. , 2020, , .		1
26	Hybrid energy-integrating and photon-counting micro-CT. , 2020, , .		0
27	Dual source hybrid spectral micro-CT using an energy-integrating and a photon-counting detector. Physics in Medicine and Biology, 2020, 65, 205012.	1.6	10
28	Sensitization of Vascular Endothelial Cells to Ionizing Radiation Promotes the Development of Delayed Intestinal Injury in Mice. Radiation Research, 2019, 192, 258.	0.7	13
29	Photon-counting cine-cardiac CT in the mouse. PLoS ONE, 2019, 14, e0218417.	1.1	16
30	Functional imaging of tumor vasculature using iodine and gadolinium-based nanoparticle contrast agents: a comparison of spectral micro-CT using energy integrating and photon counting detectors. Physics in Medicine and Biology, 2019, 64, 065007.	1.6	44
31	Bridging the translational gap: Implementation of multimodal small animal imaging strategies for tumor burden assessment in a co-clinical trial. PLoS ONE, 2019, 14, e0207555.	1.1	15
32	Vascular Endothelial Growth Factor Receptor 3 Regulates Endothelial Function Through β -Arrestin 1. Circulation, 2019, 139, 1629-1642.	1.6	33
33	Convolutional regularization methods for 4D, x-ray CT reconstruction. , 2019, , .		8
34	Spectral data completion for dual-source x-ray CT. , 2019, , .		3
35	Multi-modal MRI segmentation of sarcoma tumors using convolutional neural networks. , 2019, , .		0
36	To gate or not to gate: an evaluation of respiratory gating techniques to improve volume measurement of murine lung tumors in micro-CT imaging. , 2019, , .		0

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37	Low-dose 4D cardiac imaging in small animals using dual source micro-CT. Physics in Medicine and Biology, 2018, 63, 025009.	1.6	18
38	A comparative analysis of EGFR-targeting antibodies for gold nanoparticle CT imaging of lung cancer. PLoS ONE, 2018, 13, e0206950.	1.1	50
39	Dual-Energy CT Imaging of Tumor Liposome Delivery After Gold Nanoparticle-Augmented Radiation Therapy. Theranostics, 2018, 8, 1782-1797.	4.6	79
40	Overcoming detector limitations of x-ray photon counting for preclinical microcomputed tomography. Journal of Medical Imaging, 2018, 6, 1.	0.8	3
41	Spectral imaging of iodine and gadolinium nanoparticles using dual-energy CT. , 2018, , .		7
42	Data-efficient methods for multi-channel x-ray CT reconstruction. , 2018, , .		4
43	Multi-energy CT decomposition using convolutional neural networks. , 2018, , .		15
44	Development of a spectral photon-counting micro-CT system with a translate-rotate geometry. , 2018, , .		1
45	Multiscale dual energy micro-CT for imaging using iodinated and gold nanoparticles. , 2018, , .		0
46	Localized and efficient cardiac CT reconstruction. Proceedings of SPIE, 2017, , .	0.8	0
47	A data-driven regularization strategy for statistical CT reconstruction. Proceedings of SPIE, 2017, , .	0.8	0
48	Low-dose 4D myocardial perfusion with x-ray micro-CT. Proceedings of SPIE, 2017, , .	0.8	0
49	Hybrid spectral CT reconstruction. PLoS ONE, 2017, 12, e0180324.	1.1	37
50	A dual energy CT study on vascular effects of gold nanoparticles in radiation therapy. , 2016, , .		1
51	Novel approaches to address spectral distortions in photon counting x-ray CT using artificial neural networks. , 2016, , .		0
52	A neural network-based method for spectral distortion correction in photon counting x-ray CT. Physics in Medicine and Biology, 2016, 61, 6132-6153.	1.6	46
53	Digital Subtracted Angiography of Small Animals. Imaging in Medical Diagnosis and Therapy, 2016, , 67-76.	0.0	0
54	Resolution-enhancing hybrid, spectral CT reconstruction. Proceedings of SPIE, 2016, , .	0.8	0

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55	Joint regularization for spectro-temporal CT reconstruction. , 2016, , .		1
56	Spectrotemporal CT data acquisition and reconstruction at low dose. Medical Physics, 2015, 42, 6317-6336.	1.6	20
57	Localization of Metal Electrodes in the Intact Rat Brain Using Registration of 3D Microcomputed Tomography Images to a Magnetic Resonance Histology Atlas. ENeuro, 2015, 2, ENEURO.0017-15.2015.	0.9	7
58	A Plasmonic Gold Nanostar Theranostic Probe for <i>In Vivo</i> Tumor Imaging and Photothermal Therapy. Theranostics, 2015, 5, 946-960.	4.6	254
59	In vivo small animal micro-CT using nanoparticle contrast agents. Frontiers in Pharmacology, 2015, 6, 256.	1.6	122
60	Spectral deblurring: an algorithm for high-resolution, hybrid spectral CT. , 2015, , .		1
61	Simultaneous imaging of multiple contrast agents using full-spectrum micro-CT. , 2015, , .		3
62	Rank-sparsity constrained atlas construction and phenotyping. , 2015, , .		0
63	Rank-sparsity constrained, spectro-temporal reconstruction for retrospectively gated, dynamic CT. , 2015, , .		0
64	SUâ€œ07: Influence of Image Registration Algorithms and Noise Levels On the Accuracy of Fractional Regional Ventilation. Medical Physics, 2015, 42, 3198-3199.	1.6	0
65	Dual-Energy Micro-CT Functional Imaging of Primary Lung Cancer in Mice Using Gold and Iodine Nanoparticle Contrast Agents: A Validation Study. PLoS ONE, 2014, 9, e88129.	1.1	84
66	Helical dual source cone-beam micro-CT. , 2014, , .		0
67	Dual-energy micro-CT imaging of pulmonary airway obstruction: correlation with micro-SPECT. Proceedings of SPIE, 2014, , .	0.8	0
68	Anatomical and functional imaging of myocardial infarction in mice using microâ€œCT and eXIA 160 contrast agent. Contrast Media and Molecular Imaging, 2014, 9, 161-168.	0.4	33
69	Spectral diffusion: an algorithm for robust material decomposition of spectral CT data. Physics in Medicine and Biology, 2014, 59, 6445-6466.	1.6	45
70	Assessing Cardiac Injury in Mice With Dual Energy-MicroCT, 4D-MicroCT, and MicroSPECT Imaging After Partial Heart Irradiation. International Journal of Radiation Oncology Biology Physics, 2014, 88, 686-693.	0.4	43
71	Micro-CT of rodents: State-of-the-art and future perspectives. Physica Medica, 2014, 30, 619-634.	0.4	167
72	Comparison of 4D-MicroSPECT and MicroCT for Murine Cardiac Function. Molecular Imaging and Biology, 2014, 16, 235-245.	1.3	15

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73	Robust material decomposition for spectral CT. Proceedings of SPIE, 2014, , .	0.8	1
74	A multi-resolution approach to retrospectively-gated cardiac micro-CT reconstruction. Proceedings of SPIE, 2014, , .	0.8	0
75	Dual-Energy Micro-Computed Tomography Imaging of Radiation-Induced Vascular Changes in Primary Mouse Sarcomas. International Journal of Radiation Oncology Biology Physics, 2013, 85, 1353-1359.	0.4	57
76	The effect of cross-scatter correction on the performance of dual energy micro-CT. Proceedings of SPIE, 2013, , .	0.8	0
77	Assessing the Radiation Response of Lung Cancer with Different Gene Mutations Using Genetically Engineered Mice. Frontiers in Oncology, 2013, 3, 72.	1.3	32
78	<i>In vivo</i> characterization of tumor vasculature using iodine and gold nanoparticles and dual energy micro-CT. Physics in Medicine and Biology, 2013, 58, 1683-1704.	1.6	158
79	Dual-Energy Computed Tomography Imaging of Atherosclerotic Plaques in a Mouse Model Using a Liposomal-Iodine Nanoparticle Contrast Agent. Circulation: Cardiovascular Imaging, 2013, 6, 285-294.	1.3	59
80	Constructing a 4D murine cardiac micro-CT atlas for automated segmentation and phenotyping applications. , 2013, , .		6
81	A LabVIEW Platform for Preclinical Imaging Using Digital Subtraction Angiography and Micro-CT. Journal of Medical Engineering, 2013, 2013, 1-13.	1.1	1
82	WE-G-134-08: Extracting Fractional Regional Ventilation in Mice. Medical Physics, 2013, 40, 513-513.	1.6	0
83	Dual-energy micro-CT of the rodent lung. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2012, 302, L1088-L1097.	1.3	45
84	Denoising of 4D cardiac micro-CT data using median-centric bilateral filtration. , 2012, 8314, .		16
85	Registration-based segmentation of murine 4D cardiac micro-CT data using symmetric normalization. Physics in Medicine and Biology, 2012, 57, 6125-6145.	1.6	14
86	4D micro-CT using fast prospective gating. Physics in Medicine and Biology, 2012, 57, 257-271.	1.6	25
87	Investigations on x-ray luminescence CT for small animal imaging. , 2012, 8313, 83130T.		8
88	Lung imaging in rodents using dual energy micro-CT. , 2012, 8317, .		5
89	A spectral calibration technique for x-ray CT. , 2012, , .		1
90	A comparison of sampling strategies for dual energy micro-CT. , 2012, , .		7

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91	Temporal and spectral imaging with micro-CT. Medical Physics, 2012, 39, 4943-4958.	1.6	19
92	Computed Tomography Imaging of Primary Lung Cancer in Mice Using a Liposomal-Iodinated Contrast Agent. PLoS ONE, 2012, 7, e34496.	1.1	60
93	Data analysis: evaluation of nanoscale contrast agent enhanced CT scan to differentiate between benign and malignant lung cancer in mouse model. AMIA ... Annual Symposium proceedings, 2012, 2012, 27-35.	0.2	1
94	High-resolution reconstruction of fluorescent inclusions in mouse thorax using anatomically guided sampling and parallel Monte Carlo computing. Biomedical Optics Express, 2011, 2, 2449.	1.5	9
95	Evaluation of Tumor Microenvironment in an Animal Model using a Nanoparticle Contrast Agent in Computed Tomography Imaging. Academic Radiology, 2011, 18, 20-30.	1.3	84
96	Micro-CT imaging assessment of dobutamine-induced cardiac stress in rats. Journal of Pharmacological and Toxicological Methods, 2011, 63, 24-29.	0.3	16
97	In vivo imaging of rat coronary arteries using bi-plane digital subtraction angiography. Journal of Pharmacological and Toxicological Methods, 2011, 64, 151-157.	0.3	3
98	Phenylephrine-modulated cardiopulmonary blood flow measured with use of X-ray digital subtraction angiography. Journal of Pharmacological and Toxicological Methods, 2011, 64, 180-186.	0.3	2
99	Dual-energy micro-CT imaging for differentiation of iodine- and gold-based nanoparticles. Proceedings of SPIE, 2011, , .	0.8	25
100	4D micro-CT for cardiac and perfusion applications with view under sampling. Physics in Medicine and Biology, 2011, 56, 3351-3369.	1.6	37
101	Highly efficient detection in fluorescence tomography of quantum dots using time-gated acquisition and ultrafast pulsed laser. , 2011, 7896, .		3
102	Multi-modality PET-CT imaging of breast cancer in an animal model using nanoparticle x-ray contrast agent and 18F-FDG. , 2011, , .		1
103	Temporal and spectral reconstruction algorithms for x-ray CT. Proceedings of SPIE, 2011, , .	0.8	1
104	Lung perfusion imaging in small animals using 4D micro-CT at heartbeat temporal resolution. Medical Physics, 2010, 37, 54-62.	1.6	29
105	GPU-based iterative reconstruction with total variation minimization for micro-CT. Proceedings of SPIE, 2010, , .	0.8	11
106	Free-space fluorescence tomography with adaptive sampling based on anatomical information from microCT. Proceedings of SPIE, 2010, 7757, .	0.8	1
107	Phase-selective image reconstruction of the lungs in small animals using micro-CT. , 2010, 7622, 76223G.1-76223G.9.		10
108	Development of a noncontact 3-D fluorescence tomography system for small animal in vivo imaging. Proceedings of SPIE, 2009, 7191, nihpa106691.	0.8	11

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109	Three-dimensional reconstruction in free-space whole-body fluorescence tomography of mice using optically reconstructed surface and atlas anatomy. <i>Journal of Biomedical Optics</i> , 2009, 14, 064010.	1.4	36
110	Quantitative blood flow measurements in the small animal cardiopulmonary system using digital subtraction angiography. <i>Medical Physics</i> , 2009, 36, 5347-5358.	1.6	21
111	Dissecting the Mechanism of Tumor Response to Radiation Therapy with Primary Lung Cancers in Mice. <i>International Journal of Radiation Oncology Biology Physics</i> , 2009, 75, S537.	0.4	3
112	In Vivo shRNA to Study the Molecular Mechanisms of Radiation Response of Primary Cancers in Mice. <i>International Journal of Radiation Oncology Biology Physics</i> , 2009, 75, S171-S172.	0.4	0
113	Effects of sampling strategy on image quality in noncontact panoramic fluorescence diffuse optical tomography for small animal imaging. <i>Optics Express</i> , 2009, 17, 5125.	1.7	17
114	4D micro-CT-based perfusion imaging in small animals. <i>Proceedings of SPIE</i> , 2009, , .	0.8	2
115	A material decomposition method for dual energy micro-CT. <i>Proceedings of SPIE</i> , 2009, , .	0.8	1
116	Micro-CT imaging of breast tumors in rodents using a liposomal, nanoparticle contrast agent. <i>International Journal of Nanomedicine</i> , 2009, 4, 277-82.	3.3	17
117	Left ventricle volume measurements in cardiac micro-CT: The impact of radiation dose and contrast agent. <i>Computerized Medical Imaging and Graphics</i> , 2008, 32, 239-250.	3.5	26
118	A High-Precision Contrast Injector for Small Animal X-Ray Digital Subtraction Angiography. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 1082-1091.	2.5	26
119	<i>In vivo</i> small-animal imaging using micro-CT and digital subtraction angiography. <i>Physics in Medicine and Biology</i> , 2008, 53, R319-R350.	1.6	247
120	Optimization of dual energy contrast enhanced breast tomosynthesis for improved mammographic lesion detection and diagnosis. <i>Proceedings of SPIE</i> , 2008, , .	0.8	10
121	Utility of a prototype liposomal contrast agent for x-ray imaging of breast cancer: a proof of concept using micro-CT in small animals. , 2008, , .		4
122	A dual micro-CT system for small animal imaging. <i>Proceedings of SPIE</i> , 2008, 6913, 691342.	0.8	51
123	A micro-CT analysis of murine lung recruitment in bleomycin-induced lung injury. <i>Journal of Applied Physiology</i> , 2008, 105, 669-677.	1.2	20
124	Geometric calibration for a dual tube/detector micro-CT system. <i>Medical Physics</i> , 2008, 35, 1820-1829.	1.6	53
125	A registration based approach for 4D cardiac micro-CT using combined prospective and retrospective gating. <i>Medical Physics</i> , 2008, 35, 1170-1179.	1.6	37
126	THA35102: Registration Based Automatic Segmentation and Wall Motion Analysis for 4D Cardiac Micro-CT in Mice. <i>Medical Physics</i> , 2008, 35, 2974-2974.	1.6	0

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127	High-resolution imaging of murine myocardial infarction with delayed-enhancement cine micro-CT. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H3172-H3178.	1.5	59
128	Tomographic digital subtraction angiography for lung perfusion estimation in rodents. Medical Physics, 2007, 34, 1546-1555.	1.6	22
129	Sparseness prior based iterative image reconstruction for retrospectively gated cardiac micro-CT. Medical Physics, 2007, 34, 4476-4483.	1.6	152
130	Measurement and modeling of 4D live mouse heart volumes from CT time series. , 2007, , .		3
131	A MICRO-CT-BASED METHOD FOR THE MEASUREMENT OF PULMONARY COMPLIANCE IN HEALTHY AND BLEOMYCIN-EXPOSED MICE. Experimental Lung Research, 2007, 33, 169-183.	0.5	29
132	Cardiac Micro-Computed Tomography for Morphological and Functional Phenotyping of Muscle LIM Protein Null Mice. Molecular Imaging, 2007, 6, 7290.2007.00022.	0.7	23
133	Cardiac micro-computed tomography for morphological and functional phenotyping of muscle LIM protein null mice. Molecular Imaging, 2007, 6, 261-8.	0.7	14
134	A Liposomal Nanoscale Contrast Agent for Preclinical CT in Mice. American Journal of Roentgenology, 2006, 186, 300-307.	1.0	226
135	Tumor imaging in small animals with a combined micro-CT/micro-DSA system using iodinated conventional and blood pool contrast agents. Contrast Media and Molecular Imaging, 2006, 1, 153-164.	0.4	47
136	Imaging Methods for Morphological and Functional Phenotyping of the Rodent Heart. Toxicologic Pathology, 2006, 34, 111-117.	0.9	38
137	Three-dimensional imaging of xenograft tumors using optical computed and emission tomography. Medical Physics, 2006, 33, 3193-3202.	1.6	24
138	Optimized radiographic spectra for small animal digital subtraction angiography. Medical Physics, 2006, 33, 4249-4257.	1.6	19
139	4-D Micro-CT of the Mouse Heart. Molecular Imaging, 2005, 4, 153535002005041.	0.7	139
140	Effects of breathing and cardiac motion on spatial resolution in the microscopic imaging of rodents. Magnetic Resonance in Medicine, 2005, 53, 858-865.	1.9	49
141	4-D micro-CT of the mouse heart. Molecular Imaging, 2005, 4, 110-6.	0.7	61
142	Micro-CT with respiratory and cardiac gating. Medical Physics, 2004, 31, 3324-3329.	1.6	174
143	Experiments with the nonlinear and chaotic behaviour of the multiplicative algebraic reconstruction technique (MART) algorithm for computed tomography. Physics in Medicine and Biology, 2004, 49, 1455-1474.	1.6	32
144	Estimation of the heart respiratory motion with applications for cone beam computed tomography imaging: a simulation study. IEEE Transactions on Information Technology in Biomedicine, 2003, 7, 404-411.	3.6	12

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145	A novel approach for distortion correction for X-ray image intensifiers. Computerized Medical Imaging and Graphics, 2003, 27, 79-85.	3.5	28
146	Logarithmic amplifier for computed tomography tasks using fluoroscopic projections. Journal of Medical Engineering and Technology, 2002, 26, 247-252.	0.8	0
147	Three-dimensional localisation based on projectional and tomographic image correlation: an application for digital tomosynthesis. Medical Engineering and Physics, 1999, 21, 101-109.	0.8	17
148	A wavelet-based method for removal of out-of-plane structures in digital tomosynthesis. Computerized Medical Imaging and Graphics, 1998, 22, 309-315.	3.5	25