Jeffrey H Siewerdsen

List of Publications by Year
in descending order

289 papers	12,297 citations	26630 56 h-index	30922 102 g-index
291 all docs	291 docs citations	291 times ranked	5514 citing authors

#	Article	IF	Citations
1	Flat-panel cone-beam computed tomography for image-guided radiation therapy. International Journal of Radiation Oncology Biology Physics, 2002, 53, 1337-1349.	0.8	1,170
2	Cone-beam computed tomography with a flat-panel imager: Magnitude and effects of x-ray scatter. Medical Physics, 2001, 28, 220-231.	3.0	512
3	Cone-beam computed tomography with a flat-panel imager: Initial performance characterization. Medical Physics, 2000, 27, 1311-1323.	3.0	451
4	Evaluation of sparse-view reconstruction from flat-panel-detector cone-beam CT. Physics in Medicine and Biology, 2010, 55, 6575-6599.	3.0	314
5	Technical aspects of dental CBCT: state of the art. Dentomaxillofacial Radiology, 2015, 44, 20140224.	2.7	278
6	Volume CT with a flat-panel detector on a mobile, isocentric C-arm: Pre-clinical investigation in guidance of minimally invasive surgery. Medical Physics, 2005, 32, 241-254.	3.0	275
7	A simple, direct method for x-ray scatter estimation and correction in digital radiography and cone-beam CT. Medical Physics, 2005, 33, 187-197.	3.0	246
8	Spektr: A computational tool for x-ray spectral analysis and imaging system optimization. Medical Physics, 2004, 31, 3057-3067.	3.0	244
9	Accurate technique for complete geometric calibration of cone-beam computed tomography systems. Medical Physics, 2005, 32, 968-983.	3.0	241
10	Empirical and theoretical investigation of the noise performance of indirect detection, active matrix flat-panel imagers (AMFPIs) for diagnostic radiology. Medical Physics, 1997, 24, 71-89.	3.0	217
11	Cone-beam-CT guided radiation therapy: technical implementation. Radiotherapy and Oncology, 2005, 75, 279-286.	0.6	217
12	A ghost story: Spatio-temporal response characteristics of an indirect-detection flat-panel imager. Medical Physics, 1999, 26, 1624-1641.	3.0	196
13	Signal, noise power spectrum, and detective quantum efficiency of indirect-detection flat-panel imagers for diagnostic radiology. Medical Physics, 1998, 25, 614-628.	3.0	194
14	The influence of antiscatter grids on soft-tissue detectability in cone-beam computed tomography with flat-panel detectors. Medical Physics, 2004, 31, 3506-3520.	3.0	192
15	Intraoperative cone-beam CT for guidance of head and neck surgery: Assessment of dose and image quality using a C-arm prototype. Medical Physics, 2006, 33, 3767-3780.	3.0	186
16	High resolution gel-dosimetry by optical-CT and MR scanning. Medical Physics, 2001, 28, 1436-1445.	3.0	183
17	Dedicated Cone-Beam CT System for Extremity Imaging. Radiology, 2014, 270, 816-824.	7.3	183
18	Optimization of x-ray imaging geometry (with specific application to flat-panel cone-beam computed) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	3.0	181

#	Article	IF	Citations
19	A framework for noise-power spectrum analysis of multidimensional images. Medical Physics, 2002, 29, 2655-2671.	3.0	171
20	Technical Note: <scp>spektr</scp> 3.0-A computational tool for x-ray spectrum modeling and analysis. Medical Physics, 2016, 43, 4711-4717.	3.0	170
21	Characterization of scattered radiation in kV CBCT images using Monte Carlo simulations. Medical Physics, 2006, 33, 4320-4329.	3.0	155
22	The influence of bowtie filtration on coneâ€beam CT image quality. Medical Physics, 2009, 36, 22-32.	3.0	148
23	A simple approach to measure computed tomography (CT) modulation transfer function (MTF) and noiseâ€power spectrum (NPS) using the American College of Radiology (ACR) accreditation phantom. Medical Physics, 2013, 40, 051907.	3.0	143
24	A dedicated coneâ€beam CT system for musculoskeletal extremities imaging: Design, optimization, and initial performance characterization. Medical Physics, 2011, 38, 4700-4713.	3.0	131
25	Cone-beam computed tomography with a flat-panel imager: Effects of image lag. Medical Physics, 1999, 26, 2635-2647.	3.0	127
26	Strategies to improve the signal and noise performance of active matrix, flat-panel imagers for diagnostic x-ray applications. Medical Physics, 2000, 27, 289-306.	3.0	126
27	Cascaded systems analysis of the 3D noise transfer characteristics of flatâ€panel coneâ€beam CT. Medical Physics, 2008, 35, 5510-5529.	3.0	111
28	Mobile Câ€arm coneâ€beam CT for guidance of spine surgery: Image quality, radiation dose, and integration with interventional guidance. Medical Physics, 2011, 38, 4563-4574.	3.0	109
29	Analysis of Fourierâ€domain taskâ€based detectability index in tomosynthesis and coneâ€beam CT in relation to human observer performance. Medical Physics, 2011, 38, 1754-1768.	3.0	108
30	Anatomical background and generalized detectability in tomosynthesis and coneâ€beam CT. Medical Physics, 2010, 37, 1948-1965.	3.0	106
31	Generalized DQE analysis of radiographic and dual-energy imaging using flat-panel detectors. Medical Physics, 2005, 32, 1397-1413.	3.0	105
32	Monte Carlo study of the effects of system geometry and antiscatter grids on coneâ€beam CT scatter distributions. Medical Physics, 2013, 40, 051915.	3.0	98
33	Optimization of dual-energy imaging systems using generalized NEQ and imaging task. Medical Physics, 2006, 34, 127-139.	3.0	93
34	Compensators for dose and scatter management in coneâ€beam computed tomography. Medical Physics, 2007, 34, 2691-2703.	3.0	88
35	3Dâ€"2D image registration for target localization in spine surgery: investigation of similarity metrics providing robustness to content mismatch. Physics in Medicine and Biology, 2016, 61, 3009-3025.	3.0	88
36	Demons deformable registration for CBCTâ€guided procedures in the head and neck: Convergence and accuracy. Medical Physics, 2009, 36, 4755-4764.	3.0	87

#	Article	IF	Citations
37	Initial performance evaluation of an indirect-detection, active matrix flat-panel imager (AMFPI) prototype for megavoltage imaging. International Journal of Radiation Oncology Biology Physics, 1998, 42, 437-454.	0.8	83
38	3D Rapid Prototyping for Otolaryngology—Head and Neck Surgery: Applications in Image-Guidance, Surgical Simulation and Patient-Specific Modeling. PLoS ONE, 2015, 10, e0136370.	2.5	83
39	Investigation of C-Arm Cone-Beam CT-Guided Surgery of the Frontal Recess. Laryngoscope, 2005, 115, 2138-2143.	2.0	81
40	Cascaded systems analysis of noise reduction algorithms in dual-energy imaging. Medical Physics, 2008, 35, 586-601.	3.0	80
41	Comparison of model and human observer performance for detection and discrimination tasks using dual-energy x-ray images. Medical Physics, 2008, 35, 5043-5053.	3.0	79
42	Intraoperative Cone-beam CT for Guidance of Temporal Bone Surgery. Otolaryngology - Head and Neck Surgery, 2006, 134, 801-808.	1.9	77
43	Demons deformable registration of CT and cone-beam CT using an iterative intensity matching approach. Medical Physics, 2011, 38, 1785-1798.	3.0	76
44	Geometric calibration of a mobile C-arm for intraoperative cone-beam CT. Medical Physics, 2008, 35, 2124-2136.	3.0	74
45	High-fidelity artifact correction for cone-beam CT imaging of the brain. Physics in Medicine and Biology, 2015, 60, 1415-1439.	3.0	74
46	Task-based detectability in CT image reconstruction by filtered backprojection and penalized likelihood estimation. Medical Physics, 2014, 41, 081902.	3.0	71
47	Assessment of image quality in soft tissue and bone visualization tasks for a dedicated extremity cone-beam CT system. European Radiology, 2015, 25, 1742-1751.	4.5	71
48	Automatic localization of vertebral levels in x-ray fluoroscopy using 3D-2D registration: a tool to reduce wrong-site surgery. Physics in Medicine and Biology, 2012, 57, 5485-5508.	3.0	69
49	Model-Based Tomographic Reconstruction of Objects Containing Known Components. IEEE Transactions on Medical Imaging, 2012, 31, 1837-1848.	8.9	68
50	Robust 3D–2D image registration: application to spine interventions and vertebral labeling in the presence of anatomical deformation. Physics in Medicine and Biology, 2013, 58, 8535-8553.	3.0	66
51	Extremity cone-beam CT for evaluation of medial tibiofemoral osteoarthritis: Initial experience in imaging of the weight-bearing and non-weight-bearing knee. European Journal of Radiology, 2015, 84, 2564-2570.	2.6	61
52	Motion compensation in extremity cone-beam CT using a penalized image sharpness criterion. Physics in Medicine and Biology, 2017, 62, 3712-3734.	3.0	61
53	Self-calibration of cone-beam CT geometry using 3D–2D image registration. Physics in Medicine and Biology, 2016, 61, 2613-2632.	3.0	60
54	Extra-dimensional Demons: A method for incorporating missing tissue in deformable image registration. Medical Physics, 2012, 39, 5718-5731.	3.0	58

#	Article	IF	Citations
55	Image quality and localization accuracy in C‑arm tomosynthesis‑guided head and neck surgery. Medical Physics, 2007, 34, 4664-4677.	3.0	56
56	Soft-tissue imaging with C-arm cone-beam CT using statistical reconstruction. Physics in Medicine and Biology, 2014, 59, 1005-1026.	3.0	56
57	Optimization of image acquisition techniques for dual‑energy imaging of the chest. Medical Physics, 2007, 34, 3904-3915.	3.0	54
58	Cone-beam CT with a flat-panel detector: From image science to image-guided surgery. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 648, S241-S250.	1.6	50
59	An empirical method for lag correction in cone‑beam CT. Medical Physics, 2008, 35, 5187-5196.	3.0	48
60	Task-based modeling and optimization of a cone-beam CT scanner for musculoskeletal imaging. Medical Physics, 2011, 38, 5612-5629.	3.0	47
61	Technical assessment of a cone‑beam CT scanner for otolaryngology imaging: Image quality, dose, and technique protocols. Medical Physics, 2012, 39, 4932-4942.	3.0	46
62	PIRPLE: a penalized-likelihood framework for incorporation of prior images in CT reconstruction. Physics in Medicine and Biology, 2013, 58, 7563-7582.	3.0	45
63	Cascaded systems analysis of photon counting detectors. Medical Physics, 2014, 41, 101907.	3.0	45
64	3D‑2D registration for surgical guidance: effect of projection view angles on registration accuracy. Physics in Medicine and Biology, 2014, 59, 271-287.	3.0	44
65	Evaluation of a System for High-Accuracy 3D Image-Based Registration of Endoscopic Video to C-Arm Cone-Beam CT for Image-Guided Skull Base Surgery. IEEE Transactions on Medical Imaging, 2013, 32, 1215-1226.	8.9	41
66	Noise aliasing and the 3D NEQ of flat-panel cone-beam CT: Effect of 2D/3D apertures and sampling. Medical Physics, 2009, 36, 3830-3843.	3.0	40
67	Antiscatter grids in mobile C-arm cone-beam CT: Effect on image quality and dose. Medical Physics, 2011, 39, 153-159.	3.0	40
68	Intraoperative cone‑beam CT for head and neck surgery: Feasibility of clinical implementation using a prototype mobile C‑arm. Head and Neck, 2013, 35, 959-967.	2.0	40
69	Known-component 3D‑2D registration for quality assurance of spine surgery pedicle screw placement. Physics in Medicine and Biology, 2015, 60, 8007-8024.	3.0	40
70	Investigation of lung nodule detectability in low-dose 320-slice computed tomography. Medical Physics, 2009, 36, 1700-1710.	3.0	39
71	dPIRPLE: a joint estimation framework for deformable registration and penalized-likelihood CT image reconstruction using prior images. Physics in Medicine and Biology, 2014, 59, 4799-4826.	3.0	39
72	MIND Demons: Symmetric Diffeomorphic Deformable Registration of MR and CT for Image-Guided Spine Surgery. IEEE Transactions on Medical Imaging, 2016, 35, 2413-2424.	8.9	39

#	Article	IF	Citations
73	TREK: an integrated system architecture for intraoperative cone-beam CT-guided surgery. International Journal of Computer Assisted Radiology and Surgery, 2012, 7, 159-173.	2.8	36
74	3D–2D registration in mobile radiographs: algorithm development and preliminary clinical evaluation. Physics in Medicine and Biology, 2015, 60, 2075-2090.	3.0	36
75	Beyond noise power in 3D computed tomography: The local NPS and off-diagonal elements of the Fourier domain covariance matrix. Medical Physics, 2012, 39, 3240-3252.	3.0	35
76	Deformable registration of the inflated and deflated lung in cone-beam CT-guided thoracic surgery: Initial investigation of a combined model-and image-driven approach. Medical Physics, 2013, 40, 017501.	3.0	35
77	Noise, sampling, and the number of projections in cone-beam CT with a flat-panel detector. Medical Physics, 2014, 41, 061909.	3.0	34
78	Intraoperative evaluation of device placement in spine surgery using known-component 3D–2D image registration. Physics in Medicine and Biology, 2017, 62, 3330-3351.	3.0	34
79	Spinal pedicle screw planning using deformable atlas registration. Physics in Medicine and Biology, 2017, 62, 2871-2891.	3.0	34
80	Intraoperative cone-beam CT for image-guided tibial plateau fracture reduction. Computer Aided Surgery, 2007, 12, 195-207.	1.8	33
81	Automatic image-to-world registration based on x-ray projections in cone-beam CT-guided interventions. Medical Physics, 2009, 36, 1800-1812.	3.0	33
82	Dual-energy cone-beam CT with a flat-panel detector: Effect of reconstruction algorithm on material classification. Medical Physics, 2014, 41, 021908.	3.0	33
83	Statistical reconstruction for cone-beam CT with a post-artifact-correction noise model: application to high-quality head imaging. Physics in Medicine and Biology, 2015, 60, 6153-6175.	3.0	33
84	Cascaded systems analysis of noise and detectability in dual-energy cone-beam CT. Medical Physics, 2012, 39, 5145-5156.	3.0	32
85	Accelerated statistical reconstruction for C-arm cone-beam CT using Nesterov's method. Medical Physics, 2015, 42, 2699-2708.	3.0	32
86	An innovative phantom for quantitative and qualitative investigation of advanced x-ray imaging technologies. Physics in Medicine and Biology, 2005, 50, N287-N297.	3.0	30
87	Real-time tracking and virtual endoscopy in cone-beam CT-guided surgery of the sinuses and skull base in a cadaver model. International Forum of Allergy and Rhinology, 2011, 1, 70-77.	2.8	30
88	Intraoperative cone-beam CT for correction of periaxial malrotation of the femoral shaft: A surface-matching approach. Medical Physics, 2007, 34, 1380-1387.	3.0	29
89	An on-board surgical tracking and video augmentation system for C-arm image guidance. International Journal of Computer Assisted Radiology and Surgery, 2012, 7, 647-665.	2.8	29
90	Task-driven image acquisition and reconstruction in cone-beam CT. Physics in Medicine and Biology, 2015, 60, 3129-3150.	3.0	29

#	Article	IF	Citations
91	Task-driven source–detector trajectories in cone-beam computed tomography: I. Theory and methods. Journal of Medical Imaging, 2019, 6, 1.	1.5	29
92	<title>Flat-panel cone-beam CT: a novel imaging technology for image-guided procedures</title>., 2001, , .		28
93	Soft‐tissue detectability in cone‐beam CT: Evaluation by 2AFC tests in relation to physical performance metrics. Medical Physics, 2007, 34, 4459-4471.	3.0	28
94	Multi-stage 3D–2D registration for correction of anatomical deformation in image-guided spine surgery. Physics in Medicine and Biology, 2017, 62, 4604-4622.	3.0	28
95	Robust methods for automatic image‐to‐world registration in cone‐beam CT interventional guidance. Medical Physics, 2012, 39, 6484-6498.	3.0	27
96	An electromagnetic "Tracker-in-Table" configuration for X-ray fluoroscopy and cone-beam CT-guided surgery. International Journal of Computer Assisted Radiology and Surgery, 2013, 8, 1-13.	2.8	27
97	Automatic Localization of Target Vertebrae in Spine Surgery. Spine, 2015, 40, E476-E483.	2.0	27
98	Image quality and dose for a multisource cone‐beam <scp>CT</scp> extremity scanner. Medical Physics, 2018, 45, 144-155.	3.0	27
99	<title>Flat-panel cone-beam CT on a mobile isocentric C-arm for image-guided brachytherapy</title>., 2002, 4682, 209.		26
100	Correction of patient motion in cone-beam CT using 3D–2D registration. Physics in Medicine and Biology, 2017, 62, 8813-8831.	3.0	26
101	Low-dose preview for patient-specific, task-specific technique selection in cone-beam CT. Medical Physics, 2014, 41, 071915.	3.0	25
102	Atlas-based automatic planning and 3D–2D fluoroscopic guidance in pelvic trauma surgery. Physics in Medicine and Biology, 2019, 64, 095022.	3.0	25
103	Fusion of intraoperative cone-beam CT and endoscopic video for image-guided procedures. , 2010, , .		24
104	Registration of MRI to intraoperative radiographs for target localization in spinal interventions. Physics in Medicine and Biology, 2017, 62, 684-701.	3.0	24
105	Automatic pedicle screw planning using atlas-based registration of anatomy and reference trajectories. Physics in Medicine and Biology, 2019, 64, 165020.	3.0	24
106	Reconstruction of difference in sequential CT studies using penalized likelihood estimation. Physics in Medicine and Biology, 2016, 61, 1986-2002.	3.0	23
107	Multimode C-arm fluoroscopy, tomosynthesis, and cone-beam CT for image-guided interventions: from proof of principle to patient protocols. , 2007, , .		22
108	High-performance intraoperative cone-beam CT on a mobile C-arm: an integrated system for guidance of head and neck surgery. , 2009, , .		22

#	Article	IF	Citations
109	Threeâ€dimensional tomosynthesis and coneâ€beam computed tomography: An experimental study for fast, lowâ€dose intraoperative imaging technology for guidance of sinus and skull base surgery. Laryngoscope, 2009, 119, 434-441.	2.0	22
110	Deformable image registration for cone-beam CT guided transoral robotic base-of-tongue surgery. Physics in Medicine and Biology, 2013, 58, 4951-4979.	3.0	22
111	Modeling and design of a cone-beam CT head scanner using task-based imaging performance optimization. Physics in Medicine and Biology, 2016, 61, 3180-3207.	3.0	22
112	Modeling and evaluation of a highâ€resolution <scp>CMOS</scp> detector for coneâ€beam <scp>CT</scp> of the extremities. Medical Physics, 2018, 45, 114-130.	3.0	22
113	DQE and system optimization for indirect-detection flat-panel imagers in diagnostic radiology. , 1998, , .		21
114	Deformable image registration with local rigidity constraints for cone-beam CT-guided spine surgery. Physics in Medicine and Biology, 2014, 59, 3761-3787.	3.0	21
115	High energy xâ€ray phase contrast CT using glancingâ€angle grating interferometers. Medical Physics, 2014, 41, 021904.	3.0	21
116	Technical assessment of a prototype coneâ€beam CT system for imaging of acute intracranial hemorrhage. Medical Physics, 2016, 43, 5745-5757.	3.0	21
117	Multiresolution iterative reconstruction in high-resolution extremity cone-beam CT. Physics in Medicine and Biology, 2016, 61, 7263-7281.	3.0	21
118	Image quality of cone beam computed tomography for evaluation of extremity fractures in the presence of metal hardware: visual grading characteristics analysis. British Journal of Radiology, 2017, 90, 20160539.	2.2	21
119	A mobile isocentric Câ€arm for intraoperative coneâ€beam CT: Technical assessment of dose and 3D imaging performance. Medical Physics, 2020, 47, 958-974.	3.0	21
120	Fracture reduction planning and guidance in orthopaedic trauma surgery via multi-body image registration. Medical Image Analysis, 2021, 68, 101917.	11.6	21
121	Deformable MR-CT image registration using an unsupervised, dual-channel network for neurosurgical guidance. Medical Image Analysis, 2022, 75, 102292.	11.6	21
122	Toward intraoperative image-guided transoral robotic surgery. Journal of Robotic Surgery, 2013, 7, 217-225.	1.8	20
123	Mobile Câ€Arm with a <scp>CMOS</scp> detector: Technical assessment of fluoroscopy and Coneâ€Beam <scp>CT</scp> imaging performance. Medical Physics, 2018, 45, 5420-5436.	3.0	20
124	Image quality and dose characteristics for an Oâ€arm intraoperative imaging system with modelâ€based image reconstruction. Medical Physics, 2018, 45, 4857-4868.	3.0	20
125	Motion compensation in extremity cone-beam computed tomography. Skeletal Radiology, 2019, 48, 1999-2007.	2.0	20
126	Location and direction dependence in the 3D MTF for a highâ€resolution CT system. Medical Physics, 2021, 48, 2760-2771.	3.0	19

#	Article	IF	Citations
127	Three-dimensional NEQ transfer characteristics of volume CT using direct- and indirect-detection flat-panel imagers. , 2003, , .		18
128	Characterization of 3D joint space morphology using an electrostatic model (with application to) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	3.0	18
129	Utility of the LevelCheck Algorithm for Decision Support in Vertebral Localization. Spine, 2016, 41, E1249-E1256.	2.0	18
130	Multi-resolution statistical image reconstruction for mitigation of truncation effects: application to cone-beam CT of the head. Physics in Medicine and Biology, 2017, 62, 539-559.	3.0	18
131	C-arm orbits for metal artifact avoidance (MAA) in cone-beam CT. Physics in Medicine and Biology, 2020, 65, 165012.	3.0	18
132	Automated Registration†Based Temporal Bone Computed Tomography Segmentation for Applications in Neurotologic Surgery. Otolaryngology - Head and Neck Surgery, 2022, 167, 133-140.	1.9	18
133	Task-driven source†detector trajectories in cone-beam computed tomography: II. Application to neuroradiology. Journal of Medical Imaging, 2019, 6, 1.	1.5	18
134	Cone-beam CT with a flat-panel imager: noise considerations for fully 3D computed tomography. , 2000, , .		17
135	Known-component metal artifact reduction (KC-MAR) for cone-beam CT. Physics in Medicine and Biology, 2019, 64, 165021.	3.0	17
136	Cone†beam CT for imaging of the head/brain: Development and assessment of scanner prototype and reconstruction algorithms. Medical Physics, 2020, 47, 2392-2407.	3.0	17
137	Peripheral quantitative CT (pQCT) using a dedicated extremity cone-beam CT scanner. Proceedings of SPIE, 2013, 8672, 867203.	0.8	16
138	Intraoperative image-guided transoral robotic surgery: pre-clinical studies. International Journal of Medical Robotics and Computer Assisted Surgery, 2015, 11, 256-267.	2.3	16
139	Task-Driven Optimization of Fluence Field and Regularization for Model-Based Iterative Reconstruction in Computed Tomography. IEEE Transactions on Medical Imaging, 2017, 36, 2424-2435.	8.9	16
140	Cone†beam CT dose and imaging performance evaluation with a modular, multipurpose phantom. Medical Physics, 2020, 47, 467-479.	3.0	16
141	Robotic drill guide positioning using known-component 3D†2D image registration. Journal of Medical Imaging, 2018, 5, 1.	1.5	16
142	Evaluation of detector readout gain mode and bowtie filters for cone-beam CT imaging of the head. Physics in Medicine and Biology, 2016, 61, 5973-5992.	3.0	15
143	Sinogram + image domain neural network approach for metal artifact reduction in low-dose cone-beam computed tomography. Journal of Medical Imaging, 2021, 8, 052103.	1.5	15
144	Cascaded systems analysis of the 3D NEQ for cone-beam CT and tomosynthesis. , 2008, , .		14

#	Article	IF	Citations
145	High-accuracy 3D image-based registration of endoscopic video to C-arm cone-beam CT for image-guided skull base surgery. Proceedings of SPIE, 2011, , .	0.8	14
146	Evaluation of low-dose limits in 3D-2D rigid registration for surgical guidance. Physics in Medicine and Biology, 2014, 59, 5329-5345.	3.0	14
147	Prospective regularization design in prior-image-based reconstruction. Physics in Medicine and Biology, 2015, 60, 9515-9536.	3.0	14
148	Planning, guidance, and quality assurance of pelvic screw placement using deformable image registration. Physics in Medicine and Biology, 2017, 62, 9018-9038.	3.0	14
149	Dynamic fluence field modulation in computed tomography using multiple aperture devices. Physics in Medicine and Biology, 2019, 64, 105024.	3.0	14
150	Virtual fluoroscopy for intraoperative C-arm positioning and radiation dose reduction. Journal of Medical Imaging, 2018, 5, 1.	1.5	14
151	Effect of fiducial configuration on target registration error in intraoperative cone-beam CT guidance of head and neck surgery. , 2008, 2008, 3643-8.		13
152	Intraoperative Câ€arm coneâ€beam computed tomography: Quantitative analysis of surgical performance in skull base surgery. Laryngoscope, 2012, 122, 1925-1932.	2.0	13
153	Volume-of-change cone-beam CT for image-guided surgery. Physics in Medicine and Biology, 2012, 57, 4969-4989.	3.0	13
154	Overcoming nonlinear partial volume effects in known-component reconstruction of Cochlear implants. , 2013, 8668, 86681L.		13
155	Polyenergetic known-component CT reconstruction with unknown material compositions and unknown x-ray spectra. Physics in Medicine and Biology, 2017, 62, 3352-3374.	3.0	13
156	C-arm positioning using virtual fluoroscopy for image-guided surgery. Proceedings of SPIE, 2017, 10135, .	0.8	13
157	Task-driven optimization of CT tube current modulation and regularization in model-based iterative reconstruction. Physics in Medicine and Biology, 2017, 62, 4777-4797.	3.0	13
158	Long-length tomosynthesis and 3D-2D registration for intraoperative assessment of spine instrumentation. Physics in Medicine and Biology, 2021, 66, 055008.	3.0	13
159	Deformable motion compensation for interventional cone-beam CT. Physics in Medicine and Biology, 2021, 66, 055010.	3.0	13
160	Intraoperative cone-beam CT for image-guided tibial plateau fracture reduction. Computer Aided Surgery, 2007, 12, 195-207.	1.8	13
161	Knownâ€component 3D image reconstruction for improved intraoperative imaging in spine surgery: A clinical pilot study. Medical Physics, 2019, 46, 3483-3495.	3.0	12
162	Non-circular CT orbit design for elimination of metal artifacts. , 2020, 11312, .		12

#	Article	IF	Citations
163	Cone-beam computed tomography on a mobile C-arm: novel intraoperative imaging technology for guidance of head and neck surgery. Journal of Otolaryngology - Head and Neck Surgery, 2008, 37, 81-90.	1.9	12
164	Deformable registration for intra-operative cone-beam CT guidance of head and neck surgery. , 2008, 2008, 3634-7.		11
165	Analysis of image noise in 3D cone-beam CT: spatial and Fourier domain approaches under conditions of varying stationarity. , 2008, , .		11
166	Visualization of anterior skull base defects with intraoperative coneâ€beam CT. Head and Neck, 2010, 32, 504-512.	2.0	11
167	Dual-energy imaging of bone marrow edema on a dedicated multi-source cone-beam CT system for the extremities. Proceedings of SPIE, 2015, 9412, .	0.8	11
168	Image-based motion compensation for high-resolution extremities cone-beam CT. Proceedings of SPIE, 2016, 9783, .	0.8	11
169	Task-driven orbit design and implementation on a robotic C-arm system for cone-beam CT. Proceedings of SPIE, 2017, 10132, .	0.8	11
170	Task-based statistical image reconstruction for high-quality cone-beam CT. Physics in Medicine and Biology, 2017, 62, 8693-8719.	3.0	11
171	Multi-body 3Dâ€"2D registration for image-guided reduction of pelvic dislocation in orthopaedic trauma surgery. Physics in Medicine and Biology, 2020, 65, 135009.	3.0	11
172	Design and validation of an open-source library of dynamic reference frames for research and education in optical tracking. Journal of Medical Imaging, 2018, 5, 1.	1.5	11
173	Cone-beam CT with a flat-panel detector on a mobile C-arm: preclinical investigation in image-guided surgery of the head and neck. , 2005, , .		10
174	Analysis of lung nodule detectability and anatomical clutter in tomosynthesis imaging of the chest. Proceedings of SPIE, 2009, , .	0.8	10
175	Model-based reconstruction of objects with inexactly known components. Proceedings of SPIE, 2012, 8313, .	0.8	10
176	Automatic masking for robust 3D-2D image registration in image-guided spine surgery. , 2016, 9786, .		10
177	Coneâ€beam imaging with tilted rotation axis: Method and performance evaluation. Medical Physics, 2020, 47, 3305-3320.	3.0	10
178	Atlas-based algorithm for automatic anatomical measurements in the knee. Journal of Medical Imaging, 2019, 6, 1.	1.5	10
179	Integration of free-hand 3D ultrasound and mobile C-arm cone-beam CT: Feasibility and characterization for real-time guidance of needle insertion. Computerized Medical Imaging and Graphics, 2017, 58, 13-22.	5.8	9
180	Joint synthesis and registration network for deformable MR-CBCT image registration for neurosurgical guidance. Physics in Medicine and Biology, 2022, 67, 125008.	3.0	9

#	ARTICLE	IF	CITATIONS
181	The generalized NEQ and detectability index for tomosynthesis and cone-beam CT: from cascaded systems analysis to human observers. Proceedings of SPIE, 2010, 7622, .	0.8	8
182	Modeling and control of nonstationary noise characteristics in filtered-backprojection and penalized likelihood image reconstruction. , 2013, 8668, .		8
183	Generalized least-squares CT reconstruction with detector blur and correlated noise models. Proceedings of SPIE, 2014, 9033, 903335.	0.8	8
184	Task-driven tube current modulation and regularization design in computed tomography with penalized-likelihood reconstruction. , 2016, 9783, .		8
185	Effects of Image Quality on the Fundamental Limits of Image Registration Accuracy. IEEE Transactions on Medical Imaging, 2017, 36, 1997-2009.	8.9	8
186	Statistical weights for model-based reconstruction in cone-beam CT with electronic noise and dual-gain detector readout. Physics in Medicine and Biology, 2018, 63, 245018.	3.0	8
187	3D vertebrae labeling in spine CT: an accurate, memory-efficient (Ortho2D) framework. Physics in Medicine and Biology, 2021, 66, 125020.	3.0	8
188	A general CT reconstruction algorithm for model-based material decomposition. , 2018, 10573, .		8
189	SpineCloud: image analytics for predictive modeling of spine surgery outcomes. Journal of Medical Imaging, 2020, 7, 1.	1.5	8
190	High-performance dual-energy imaging with a flat-panel detector: imaging physics from blackboard to benchtop to bedside. , 2006, , .		7
191	Deformable registration of the inflated and deflated lung for cone-beam CT-guided thoracic surgery. Proceedings of SPIE, 2012, 8316, .	0.8	7
192	High-performance C-arm cone-beam CT guidance of thoracic surgery. , 2012, , .		7
193	High-performance soft-tissue imaging in extremity cone-beam CT. Proceedings of SPIE, 2014, 9033, 903329.	0.8	7
194	Volumetric CT with sparse detector arrays (and application to Si-strip photon counters). Physics in Medicine and Biology, 2016, 61, 90-113.	3.0	7
195	Technical assessment of a mobile CT scanner for image‑guided brachytherapy. Journal of Applied Clinical Medical Physics, 2019, 20, 187-200.	1.9	7
196	Coupled active shape models for automated segmentation and landmark localization in high-resolution CT of the foot and ankle. , 2019, 10953, .		7
197	Model-based dual-energy tomographic image reconstruction of objects containing known metal components. Physics in Medicine and Biology, 2020, 65, 245046.	3.0	7
198	Reference-free learning-based similarity metric for motion compensation in cone-beam CT. Physics in Medicine and Biology, 2022, 67, 125020.	3.0	7

#	Article	IF	Citations
199	<title>Unified iso-SNR approach to task-directed imaging in flat-panel cone-beam CT</title>. , 2002, , .		6
200	Architecture of a high-performance surgical guidance system based on C-arm cone-beam CT: software platform for technical integration and clinical translation. Proceedings of SPIE, 2011, , .	0.8	6
201	Automatic localization of target vertebrae in spine surgery using fast CT-to-fluoroscopy (3D-2D) image registration. Proceedings of SPIE, 2012, , .	0.8	6
202	Self-calibration of cone-beam CT geometry using 3D-2D image registration: development and application to tasked-based imaging with a robotic C-arm. , 2015, 9415, .		6
203	A momentum-based diffeomorphic demons framework for deformable MR-CT image registration. Physics in Medicine and Biology, 2018, 63, 215006.	3.0	6
204	Predicting image properties in penalized‐likelihood reconstructions of flat‐panel CBCT. Medical Physics, 2019, 46, 65-80.	3.0	6
205	Surgineering: curriculum concept for experiential learning in upper-level biomedical engineering. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 1-14.	2.8	6
206	Atlas-based automatic measurements of the morphology of the tibiofemoral joint. Proceedings of SPIE, 2017, 10137, .	0.8	6
207	Optimized spatial-spectral CT for multi-material decomposition. , 2019, 11072, .		6
208	Quantitative assessment of weight-bearing fracture biomechanics using extremity cone-beam CT. , 2020, 11317, .		6
209	Design of dual multiple aperture devices for dynamical fluence field modulated CT. , 2016, 2016, 29-32.		6
210	Technical assessment of 2D and 3D imaging performance of an IGZO‐based flat‐panel X‐ray detector. Medical Physics, 2022, 49, 3053-3066.	3.0	6
211	Soft-tissue imaging in low-dose, C-arm cone-beam CT using statistical image reconstruction. , 2013, 8668, .		5
212	Known-component 3D-2D registration for image guidance and quality assurance in spine surgery pedicle screw placement. Proceedings of SPIE, 2015, 9415, .	0.8	5
213	MIND Demons for MR-to-CT deformable image registration in image-guided spine surgery. Proceedings of SPIE, 2016, 9786, .	0.8	5
214	Fundamental limits of image registration performance: effects of image noise and resolution in CT-guided interventions. Proceedings of SPIE, 2017, 10135, .	0.8	5
215	Technology and applications in interventional imaging: 2D X-ray radiography/fluoroscopy and 3D cone-beam CT. , 2020, , 625-671.		5
216	Accelerated 3D image reconstruction with a morphological pyramid and noise-power convergence criterion. Physics in Medicine and Biology, 2021, 66, 055012.	3.0	5

#	Article	IF	Citations
217	Dynamic fluence field modulation for miscentered patients in computed tomography. Journal of Medical Imaging, 2018, 5, 1.	1.5	5
218	A robotic x-ray cone-beam CT system: trajectory optimization for 3D imaging of the weight-bearing spine. , 2019, , .		5
219	Quantitative cone-beam CT of bone mineral density using model-based reconstruction. , 2019, 10948, .		5
220	Demons deformable registration for cone-beam CT guidance: registration of pre- and intra-operative images. Proceedings of SPIE, 2010, , .	0.8	4
221	Effect of statistical mismatch between training and test images for CNN-based deformable registration. , 2019, , .		4
222	Image-guided robotic k-wire placement for orthopaedic trauma surgery. , 2020, , .		4
223	Evaluation of image quality and task performance for a mobile C-arm with a complementary metal–oxide semiconductor detector. Journal of Medical Imaging, 2020, 7, 1.	1.5	4
224	Information Propagation in Prior-Image-Based Reconstruction. , 2012, 2012, 334-338.		4
225	Modeling Shift-Variant X-Ray Focal Spot Blur for High-Resolution Flat-Panel Cone-Beam CT. , 2016, 2016, 463-466.		4
226	Volume-of-interest CT imaging with dynamic beam filtering using multiple aperture devices. , 2018, 2018, 213-217.		4
227	Design and optimization of a dedicated cone-beam CT system for musculoskeletal extremities imaging. Proceedings of SPIE, 2011, , .	0.8	3
228	Tracker-on-C for cone-beam CT-guided surgery: evaluation of geometric accuracy and clinical applications. , 2012, , .		3
229	High energy x-ray phase-contrast imaging using glancing angle grating interferometers. , 2013, 8668, .		3
230	Regularization design and control of change admission in prior-image-based reconstruction. Proceedings of SPIE, 2014, 9033, .	0.8	3
231	Geometric calibration using line fiducials for cone-beam CT with general, non-circular source-detector trajectories. Proceedings of SPIE, 2017, 10132, .	0.8	3
232	Joint optimization of fluence field modulation and regularization in task-driven computed tomography. , 2017, 10132, .		3
233	Clinical Translation of the LevelCheck Decision Support Algorithm for Target Localization in Spine Surgery. Annals of Biomedical Engineering, 2018, 46, 1548-1557.	2.5	3
234	A Statistical Model for Rigid Image Registration Performance: The Influence of Soft-Tissue Deformation as a Confounding Noise Source. IEEE Transactions on Medical Imaging, 2019, 38, 2016-2027.	8.9	3

#	ARTICLE	IF	CITATIONS
235	Robot-assisted ventriculoscopic 3D reconstruction for guidance of deep-brain stimulation surgery. , 2021, , .		3
236	Volume-of-interest imaging with dynamic fluence modulation using multiple aperture devices. Journal of Medical Imaging, 2019, 6, 1.	1.5	3
237	Automatic analysis of global spinal alignment from simple annotation of vertebral bodies. Journal of Medical Imaging, 2020, 7, 1.	1.5	3
238	Prospective image quality analysis and control for prior-image-based reconstruction of low-dose CT. , 2018, 10573, .		3
239	Image-based deformable motion compensation for interventional cone-beam CT. , 2019, , .		3
240	Clinical study of soft-tissue contrast resolution in cone-beam CT of the head using multi-resolution PWLS with multi-motion correction and an electronic noise model. , 2019, , .		3
241	Estimation of local deformable motion in image-based motion compensation for interventional cone-beam CT. , 2020, , .		3
242	Slotâ€scan dualâ€energy bone densitometry using motorized Xâ€ray systems. Medical Physics, 2021, 48, 6673-6695.	3.0	3
243	High-resolution extremity cone-beam CT with a CMOS detector: task-based optimization of scintillator thickness. , 2017, 10132, .		3
244	Known-component model-based material decomposition for dual energy imaging of bone compositions in the presence of metal implant. , 2019, 11072, .		3
245	Learning-based deformable image registration: effect of statistical mismatch between train and test images. Journal of Medical Imaging, 2019, 6, 1.	1.5	3
246	Pre-Clinical Development of Robot-Assisted Ventriculoscopy for 3-D Image Reconstruction and Guidance of Deep Brain Neurosurgery. IEEE Transactions on Medical Robotics and Bionics, 2022, 4, 28-37.	3.2	3
247	Task-Based Regularization Design for Detection of Intracranial Hemorrhage in Cone-Beam CT. , 2016, 2016, 557-560.		3
248	Automated Extraction of Anatomical Measurements From Temporal Bone CT Imaging. Otolaryngology - Head and Neck Surgery, 2022, 167, 731-738.	1.9	3
249	Model-based three-material decomposition in dual-energy CT using the volume conservation constraint. Physics in Medicine and Biology, 2022, 67, 145006.	3.0	3
250	Noise reduction in material decomposition for low-dose dual-energy cone-beam CT. , 2013, 8668, .		2
251	Cone-beam CT of traumatic brain injury using statistical reconstruction with a post-artifact-correction noise model. , 2015, 9412, .		2
252	Spectral CT of the extremities with a silicon strip photon counting detector. Proceedings of SPIE, 2015, 9412, .	0.8	2

#	ARTICLE	IF	CITATIONS
253	Nonlinear statistical reconstruction for flat-panel cone-beam CT with blur and correlated noise models. , 2016, 9783, .		2
254	Reconstruction-of-difference (RoD) imaging for cone-beam CT neuro-angiography. Physics in Medicine and Biology, 2018, 63, 115004.	3.0	2
255	Ultraviolet germicidal irradiation of the inner bore of a CT gantry. Journal of Applied Clinical Medical Physics, 2020, 21, 325-328.	1.9	2
256	Association Between Knee Anatomic Metrics and Biomechanics for Male Soldiers Landing With Load. American Journal of Sports Medicine, 2020, 48, 1389-1397.	4.2	2
257	Drill-mounted video guidance for orthopaedic trauma surgery. Journal of Medical Imaging, 2021, 8, 015002.	1.5	2
258	Theory, method, and test tools for determination of 3D MTF characteristics in coneâ€beam CT. Medical Physics, 2021, 48, 2772-2789.	3.0	2
259	Development of a fluoroscopically guided robotic assistant for instrument placement in pelvic trauma surgery. Journal of Medical Imaging, 2021, 8, 035001.	1.5	2
260	Intraoperative coneâ€beam and slotâ€beam CT: 3D image quality and dose with a slot collimator on the Oâ€arm imaging system. Medical Physics, 2021, 48, 6800-6809.	3.0	2
261	Cone-beam CT statistical reconstruction with a model for fluence modulation and electronic readout noise. , 2019, , .		2
262	Improved intraoperative imaging in spine surgery: clinical translation of known-component 3D image reconstruction on the O-arm system. , 2019, , .		2
263	Optimization of cone-beam CT scan orbits for cervical spine imaging. , 2019, , .		2
264	Convergence criterion for MBIR based on the local noise-power spectrum: Theory and implementation in a framework for accelerated 3D image reconstruction with a morphological pyramid. , 2019, 11072, .		2
265	Cone-Beam CT Systems. , 2020, , 11-26.		2
266	Calibration and registration of a freehand video-guided surgical drill for orthopaedic trauma. , 2020, 11315, .		2
267	High-Fidelity Modeling of Detector Lag and Gantry Motion in CT Reconstruction. , 2018, 2018, 318-322.		2
268	Science and practice of imaging physics through 50 years of SPIE Medical Imaging conferences. Journal of Medical Imaging, 2022, 9, 012205.	1.5	2
269	Sampling effects for emerging cone-beam CT systems and scan trajectories: from Tuyâ€™s condition to system design and routine image quality tests. , 2022, , .		2
270	Theoretical framework for the dual-energy cone-beam CT noise-power spectrum NEQ and tasked-based detectability index. Proceedings of SPIE, 2012, 8313, .	0.8	1

#	Article	IF	Citations
271	Cascaded systems modeling of signal, noise, and DQE for x-ray photon counting detectors. , 2014, , .		1
272	Design and characterization of a dedicated cone-beam CT scanner for detection of acute intracranial hemorrhage. Proceedings of SPIE, 2016, , .	0.8	1
273	Regularization design for high-quality cone-beam CT of intracranial hemorrhage using statistical reconstruction. Proceedings of SPIE, 2016, , .	0.8	1
274	Image-based deformable motion compensation in cone-beam CT: translation to clinical studies in interventional body radiology. , 2020, , .		1
275	Image quality, scatter, and dose in compact CBCT systems with flat and curved detectors. , 2018, , .		1
276	Pixelated columnar CsI:Tl scintillator for high resolution radiography and cone-beam CT. , 2020, 11312, .		1
277	Task-Based Design of Fluence Field Modulation in CT for Model-Based Iterative Reconstruction. , 2016, 2016, 407-410.		1
278	Targeted deformable motion compensation for vascular interventional cone-beam CT imaging. , 2022, , .		1
279	Motion-compensated targeting in pulmonary interventions using cone-beam CT and locally rigid / globally deformable 3D-2D registration. , 2022, , .		1
280	Investigation of low-contrast tumor detection in algorithm-enabled low-dose CBCT. , 2010, , .		0
281	Incorporation of prior knowledge for region of change imaging from sparse scan data in image-guided surgery. Proceedings of SPIE, 2012, 8316, .	0.8	0
282	A biological phantom for evaluation of CT image reconstruction algorithms. , 2014, 9033, .		0
283	Patient-specific minimum-dose imaging protocols for statistical image reconstruction in C-arm cone-beam CT using correlated noise injection. , 2014, 9033, .		0
284	Task-driven imaging in cone-beam computed tomography. , 2015, 9412, .		0
285	A generalized Fourier penalty in prior-image-based reconstruction for cross-platform imaging. , 2016, , .		0
286	WE-AB-BRA-01: 3D-2D Image Registration for Target Localization in Spine Surgery: Comparison of Similarity Metrics Against Robustness to Content Mismatch. Medical Physics, 2015, 42, 3652-3653.	3.0	0
287	A statistical model for image registration performance: effect of tissue deformation. , 2018, , .		0
288	Imaging performance of CMOS and a-Si:H flat-panel detectors for C-arm fluoroscopy and cone-beam CT. , 2018, , .		0

#	Article	IF	Citations
289	Implementation and Assessment of Dynamic Fluence Field Modulation with Multiple Aperture Devices. , 2018, 2018, 47-51.		0