

David Sarrut

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

116
papers

3,622
citations

29
h-index

58
g-index

162
ext. papers

4,289
ext. citations

2.8
avg, IF

5.2
L-index

#	Paper	IF	Citations
116	Minimum non-isotropic and asymmetric margins for taking into account intrafraction prostate motion during moderately hypofractionated radiotherapy.. <i>Physica Medica</i> , 2022 , 96, 114-120	2.7	0
115	Patient-specific dosimetry adapted to variable number of SPECT/CT time-points per cycle for [Formula: see text]Lu-DOTATATE therapy.. <i>EJNMMI Physics</i> , 2022 , 9, 37	4.4	0
114	Monte Carlo simulations for medical and biomedical applications 2022 , 23-53		0
113	Projection-based dynamic tomography. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	1
112	Artificial Intelligence for Monte Carlo Simulation in Medical Physics. <i>Frontiers in Physics</i> , 2021 , 9,	3.9	1
111	Advanced Monte Carlo simulations of emission tomography imaging systems with GATE. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	9
110	Influence of sub-nanosecond time of flight resolution for online range verification in proton therapy using the line-cone reconstruction in Compton imaging. <i>Physics in Medicine and Biology</i> , 2021 , 66,	3.8	1
109	Modeling complex particles phase space with GAN for Monte Carlo SPECT simulations: a proof of concept. <i>Physics in Medicine and Biology</i> , 2021 , 66, 055014	3.8	3
108	Yttrium-90 quantitative phantom study using digital photon counting PET. <i>EJNMMI Physics</i> , 2021 , 8, 56	4.4	0
107	Influence of Doppler broadening model accuracy in Compton camera list-mode MLEM reconstruction. <i>Inverse Problems in Science and Engineering</i> , 2021 , 29, 3509-3529	1.3	0
106	Technical Note: GATE-RTion: a GATE/Geant4 release for clinical applications in scanned ion beam therapy. <i>Medical Physics</i> , 2020 , 47, 3675-3681	4.4	12
105	OpenDose: Open-Access Resource for Nuclear Medicine Dosimetry. <i>Journal of Nuclear Medicine</i> , 2020 , 61, 1514-1519	8.9	19
104	A GATE/Geant4 beam model for the MedAustron non-isocentric proton treatment plans quality assurance. <i>Physica Medica</i> , 2020 , 71, 115-123	2.7	9
103	Monte Carlo simulation of digital photon counting PET. <i>EJNMMI Physics</i> , 2020 , 7, 23	4.4	6
102	Capability of MLEM and OE to Detect Range Shifts With a Compton Camera in Particle Therapy. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2020 , 4, 233-242	4.2	5
101	CCMod: a GATE module for Compton camera imaging simulation. <i>Physics in Medicine and Biology</i> , 2020 , 65, 055004	3.8	4
100	3-D Reconstruction Benchmark of a Compton Camera Against a Parallel-Hole Gamma Camera on Ideal Data. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , 2020 , 4, 479-488	4.2	3

99	Evaluation of GATE-RTion (GATE/Geant4) Monte Carlo simulation settings for proton pencil beam scanning quality assurance. <i>Medical Physics</i> , 2020 , 47, 5817-5828	4.4	0
98	Mid-position treatment strategy for locally advanced lung cancer: a dosimetric study. <i>British Journal of Radiology</i> , 2020 , 93, 20190692	3.4	2
97	Generative adversarial networks (GAN) for compact beam source modelling in Monte Carlo simulations. <i>Physics in Medicine and Biology</i> , 2019 , 64, 215004	3.8	8
96	In vivo gadolinium nanoparticle quantification with SPECT/CT. <i>EJNMMI Physics</i> , 2019 , 6, 9	4.4	3
95	Comparison of electromagnetic transmitter and ultrasound imaging for intrafraction monitoring of prostate radiotherapy. <i>Radiotherapy and Oncology</i> , 2019 , 136, 1-8	5.3	6
94	Fixed forced detection for fast SPECT Monte-Carlo simulation. <i>Physics in Medicine and Biology</i> , 2018 , 63, 055011	3.8	5
93	ESTRO ACROP: Technology for precision small animal radiotherapy research: Optimal use and challenges. <i>Radiotherapy and Oncology</i> , 2018 , 126, 471-478	5.3	62
92	A first-in-human study investigating biodistribution, safety and recommended dose of a new radiolabeled MAb targeting FZD10 in metastatic synovial sarcoma patients. <i>BMC Cancer</i> , 2018 , 18, 646	4.8	29
91	Aramis 2018 ,		10
90	Image-based SPECT calibration based on the evaluation of the Fraction of Activity in the Field of View. <i>EJNMMI Physics</i> , 2018 , 5, 11	4.4	5
89	Learning SPECT detector angular response function with neural network for accelerating Monte-Carlo simulations. <i>Physics in Medicine and Biology</i> , 2018 , 63, 205013	3.8	6
88	Concepts and terms for dose/volume parameters in carbon-ion radiotherapy: Conclusions of the ULICE taskforce. <i>Cancer Radiotherapie: Journal De La Societe Francaise De Radiotherapie Oncologique</i> , 2018 , 22, 802-809	1.3	1
87	Total variation and point spread function priors for MLEM reconstruction in Compton camera imaging 2018 ,		1
86	3D absorbed dose distribution estimated by Monte Carlo simulation in radionuclide therapy with a monoclonal antibody targeting synovial sarcoma. <i>EJNMMI Physics</i> , 2017 , 4, 6	4.4	13
85	Deformable image registration applied to lung SBRT: Usefulness and limitations. <i>Physica Medica</i> , 2017 , 44, 108-112	2.7	12
84	Voxel-based multimodel fitting method for modeling time activity curves in SPECT images. <i>Medical Physics</i> , 2017 , 44, 6280-6288	4.4	7
83	Optimization of GATE simulations for whole-body planar scintigraphic acquisitions using the XCAT male phantom with Lu-DOTATATE biokinetics in a Siemens Symbia T2. <i>Physica Medica</i> , 2017 , 42, 292-297 ^{2.7}		9
82	SYNFRIZZ: A first-in-human (FIH) study of a radiolabeled monoclonal antibody (Mab) targeting frizzled homolog 10 (FZD10) in patients (pts) with advanced synovial sarcomas (SyS).. <i>Journal of Clinical Oncology</i> , 2017 , 35, 11054-11054	2.2	1

81	Evaluation of a new transperineal ultrasound probe for inter-fraction image-guidance for definitive and post-operative prostate cancer radiotherapy. <i>Physica Medica</i> , 2016 , 32, 499-505	2.7	19
80	An empirical model for calculation of the collimator contamination dose in therapeutic proton beams. <i>Physics in Medicine and Biology</i> , 2016 , 61, 1532-45	3.8	5
79	Proton therapy monitoring by Compton imaging: influence of the large energy spectrum of the prompt- γ radiation. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3127-46	3.8	23
78	Accelerated prompt gamma estimation for clinical proton therapy simulations. <i>Physics in Medicine and Biology</i> , 2016 , 61, 7725-7743	3.8	9
77	Validation of fast Monte Carlo dose calculation in small animal radiotherapy with EBT3 radiochromic films. <i>Physics in Medicine and Biology</i> , 2016 , 61, 3521-35	3.8	14
76	Ultrasound versus Cone-beam CT image-guided radiotherapy for prostate and post-prostatectomy pretreatment localization. <i>Physica Medica</i> , 2015 , 31, 997-1004	2.7	15
75	Realistic Simulations for the Evaluation of Monomodal Registration Algorithms of 3D Pelvic Ultrasound Images. <i>Physics Procedia</i> , 2015 , 70, 1169-1172		
74	An image-based method to synchronize cone-beam CT and optical surface tracking. <i>Journal of Applied Clinical Medical Physics</i> , 2015 , 16, 5152	2.3	7
73	Monte Carlo simulation of prompt γ emission in proton therapy using a specific track length estimator. <i>Physics in Medicine and Biology</i> , 2015 , 60, 8067-86	3.8	6
72	Development of 2D+T tracking algorithm in ultrasound images for radiotherapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2015 , 2015, 2916-9	0.9	
71	Evaluation of intrafraction motions with a transperineal ultrasound imaging system: Dosimetric impact for prostate cancer. <i>Physica Medica</i> , 2015 , 31, e25-e26	2.7	
70	A track length estimator method for dose calculations in low-energy X-ray irradiations: implementation, properties and performance. <i>Zeitschrift Fur Medizinische Physik</i> , 2015 , 25, 36-47	7.6	10
69	Surrogate-driven deformable motion model for organ motion tracking in particle radiation therapy. <i>Physics in Medicine and Biology</i> , 2015 , 60, 1565-82	3.8	17
68	MO-DE-210-04: Repositioning and Monitoring of Prostate Cancer Radiotherapy with a New 4D Ultrasound Intra-Modality IGRT Device. <i>Medical Physics</i> , 2015 , 42, 3560-3560	4.4	0
67	A review of the use and potential of the GATE Monte Carlo simulation code for radiation therapy and dosimetry applications. <i>Medical Physics</i> , 2014 , 41, 064301	4.4	219
66	Tumor tracking method based on a deformable 4D CT breathing motion model driven by an external surface surrogate. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 88, 182-8	4	40
65	Semiautomatic registration of 3D transabdominal ultrasound images for patient repositioning during postprostatectomy radiotherapy. <i>Medical Physics</i> , 2014 , 41, 122903	4.4	8
64	In-room breathing motion estimation from limited projection views using a sliding deformation model. <i>Journal of Physics: Conference Series</i> , 2014 , 489, 012026	0.3	1

63	Motion artifact detection in four-dimensional computed tomography images. <i>Journal of Physics: Conference Series</i> , 2014 , 489, 012024	0.3	
62	Split exponential track length estimator for Monte-Carlo simulations of small-animal radiation therapy. <i>Physics in Medicine and Biology</i> , 2014 , 59, 7703-15	3.8	17
61	Learning directional relative positions between mediastinal lymph node stations and organs. <i>Medical Physics</i> , 2014 , 41, 061905	4.4	3
60	The Reconstruction Toolkit (RTK), an open-source cone-beam CT reconstruction toolkit based on the Insight Toolkit (ITK). <i>Journal of Physics: Conference Series</i> , 2014 , 489, 012079	0.3	80
59	Impact of probe pressure variability on prostate localization for ultrasound-based image-guided radiotherapy. <i>Radiotherapy and Oncology</i> , 2014 , 111, 132-7	5.3	23
58	Machine learning-based patient specific prompt-gamma dose monitoring in proton therapy. <i>Physics in Medicine and Biology</i> , 2013 , 58, 4563-77	3.8	46
57	Computed tomographic atlas for the new international lymph node map for lung cancer: A radiation oncologist perspective. <i>Practical Radiation Oncology</i> , 2013 , 3, 54-66	2.8	28
56	Distributions of secondary particles in proton and carbon-ion therapy: a comparison between GATE/Geant4 and FLUKA Monte Carlo codes. <i>Physics in Medicine and Biology</i> , 2013 , 58, 2879-99	3.8	93
55	Is abdominal compression useful in lung stereotactic body radiation therapy? A 4DCT and dosimetric lobe-dependent study. <i>Physica Medica</i> , 2013 , 29, 333-40	2.7	56
54	. <i>IEEE Transactions on Nuclear Science</i> , 2013 , 60, 423-429	1.7	12
53	Monte Carlo simulation on heterogeneous distributed systems: A computing framework with parallel merging and checkpointing strategies. <i>Future Generation Computer Systems</i> , 2013 , 29, 728-738	7.5	21
52	Registration of sliding objects using direction dependent B-splines decomposition. <i>Physics in Medicine and Biology</i> , 2013 , 58, 1303-14	3.8	53
51	An efficient numerical tool for dose deposition prediction applied to synchrotron medical imaging and radiation therapy. <i>Journal of Synchrotron Radiation</i> , 2013 , 20, 785-92	2.4	16
50	PET-based dose delivery verification in proton therapy: a GATE based simulation study of five PET system designs in clinical conditions. <i>Physics in Medicine and Biology</i> , 2013 , 58, 6867-85	3.8	14
49	Filtered backprojection proton CT reconstruction along most likely paths. <i>Medical Physics</i> , 2013 , 40, 031103	4.0	61
48	Validation and Comparison of Approaches to Respiratory Motion Estimation 2013 , 159-183		1
47	Respiratory Motion Correction in Cone-Beam CT for Image-Guided Radiotherapy 2013 , 319-334		
46	Intensity-Based Deformable Registration: Introduction and Overview 2013 , 103-124		1

45	In regard to Yang et al. <i>International Journal of Radiation Oncology Biology Physics</i> , 2012 , 84, 304; author reply 304-5	4	1
44	Hybrid GATE: A GPU/CPU implementation for imaging and therapy applications 2012 ,		4
43	GATE as a GEANT4-based Monte Carlo platform for the evaluation of proton pencil beam scanning treatment plans. <i>Physics in Medicine and Biology</i> , 2012 , 57, 4223-44	3.8	43
42	Automated segmentation of a motion mask to preserve sliding motion in deformable registration of thoracic CT. <i>Medical Physics</i> , 2012 , 39, 1006-15	4.4	62
41	Multi-dimensional respiratory motion tracking from markerless optical surface imaging based on deformable mesh registration. <i>Physics in Medicine and Biology</i> , 2012 , 57, 357-73	3.8	50
40	GATE V6: a major enhancement of the GATE simulation platform enabling modelling of CT and radiotherapy. <i>Physics in Medicine and Biology</i> , 2011 , 56, 881-901	3.8	488
39	Simulation of a 6 MV Elekta Precise Linac photon beam using GATE/GEANT4. <i>Physics in Medicine and Biology</i> , 2011 , 56, 903-18	3.8	72
38	532 oral A NOVEL CT-BASED CONTRAST ENHANCEMENT TECHNIQUE FOR MARKERLESS LUNG TUMOR TRACKING IN X-RAY PROJECTION IMAGES. <i>Radiotherapy and Oncology</i> , 2011 , 99, S217	5.3	4
37	Enabling Grids for GATE Monte-Carlo Radiation Therapy Simulations with the GATE-Lab 2011 ,		2
36	Evaluation of registration methods on thoracic CT: the EMPIRE10 challenge. <i>IEEE Transactions on Medical Imaging</i> , 2011 , 30, 1901-20	11.7	311
35	A Monte Carlo pencil beam scanning model for proton treatment plan simulation using GATE/GEANT4. <i>Physics in Medicine and Biology</i> , 2011 , 56, 5203-19	3.8	119
34	Spatiotemporal motion estimation for respiratory-correlated imaging of the lungs. <i>Medical Physics</i> , 2011 , 38, 166-78	4.4	105
33	Dynamic Partitioning of GATE Monte-Carlo Simulations on EGEE. <i>Journal of Grid Computing</i> , 2010 , 8, 241-259	4.259	31
32	B-LUT: Fast and low memory B-spline image interpolation. <i>Computer Methods and Programs in Biomedicine</i> , 2010 , 99, 172-8	6.9	5
31	Towards an efficient microsystem for the real-time detection and quantification of mercury in water based on a specifically designed fluorogenic binary task-specific ionic liquid. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 424-7	16.4	53
30	Optimization of GEANT4 settings for Proton Pencil Beam Scanning simulations using GATE. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2010 , 268, 3295-3305	1.2	95
29	Influence of Geant4 parameters on dose distribution and computation time for carbon ion therapy simulation. <i>Physica Medica</i> , 2010 , 26, 202-8	2.7	27
28	Results of a multi-institution deformable registration accuracy study (MIDRAS). <i>International Journal of Radiation Oncology Biology Physics</i> , 2010 , 76, 583-96	4	300

27	Comparison of analytic and algebraic methods for motion-compensated cone-beam CT reconstruction of the thorax. <i>IEEE Transactions on Medical Imaging</i> , 2009 , 28, 1513-25	11.7	51
26	Monte-Carlo based prediction of radiochromic film response for hadrontherapy dosimetry. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009 , 606, 749-754	1.2	7
25	Respiratory motion estimation from cone-beam projections using a prior model. <i>Lecture Notes in Computer Science</i> , 2009 , 12, 365-72	0.9	7
24	Region-oriented CT image representation for reducing computing time of Monte Carlo simulations. <i>Medical Physics</i> , 2008 , 35, 1452-63	4.4	28
23	4D-CT lung motion estimation with deformable registration: quantification of motion nonlinearity and hysteresis. <i>Medical Physics</i> , 2008 , 35, 1008-18	4.4	106
22	Evaluation of deformable registration of patient lung 4DCT with subanatomical region segmentations. <i>Medical Physics</i> , 2008 , 35, 775-81	4.4	110
21	A comparison framework for breathing motion estimation methods from 4-D imaging. <i>IEEE Transactions on Medical Imaging</i> , 2007 , 26, 1636-48	11.7	41
20	Cone-beam projection of a deformable volume for motion compensated algebraic reconstruction. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007 , 2007, 6544-7		1
19	MO-D-L100J-08: Construction of 4D-CT Motion Model Using Deformable Registration: Comparison of Eulerian and Lagrangian Approaches. <i>Medical Physics</i> , 2007 , 34, 2517-2517	4.4	0
18	Simulation of four-dimensional CT images from deformable registration between inhale and exhale breath-hold CT scans. <i>Medical Physics</i> , 2006 , 33, 605-17	4.4	90
17	Deformable registration for image-guided radiation therapy. <i>Zeitschrift Fur Medizinische Physik</i> , 2006 , 16, 285-97	7.6	68
16	A FAST MORPHING-BASED INTERPOLATION FOR MEDICAL IMAGES: APPLICATION TO CONFORMAL RADIOTHERAPY. <i>Image Analysis and Stereology</i> , 2006 , 25, 95	1	6
15	SU-FF-T-154: Cumulating Static Dose Distributions to Simulate Dynamic Dose Distributions: An Experimental Study. <i>Medical Physics</i> , 2006 , 33, 2084-2084	4.4	
14	SU-FF-I-99: Implementation and Evaluation of Automatic Contour Propagation in 4DCT of Lung. <i>Medical Physics</i> , 2006 , 33, 2019-2020	4.4	
13	Respiratory signal extraction for 4D CT imaging of the thorax from cone-beam CT projections. <i>Lecture Notes in Computer Science</i> , 2005 , 8, 556-63	0.9	8
12	Nonrigid registration method to assess reproducibility of breath-holding with ABC in lung cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2005 , 61, 594-607	4	47
11	Comparison of 3D dense deformable registration methods for breath-hold reproducibility study in radiotherapy 2005 ,		4
10	Intégration de connaissances et modélisation en imagerie médicale. <i>IRBM News</i> , 2004 , 25, 139-149		1

9	Usefulness of image morphing techniques in cancer treatment by conformal radiotherapy 2004 , 5367, 332		
8	Lung Deformation Estimation with Non-rigid Registration for Radiotherapy Treatment. <i>Lecture Notes in Computer Science</i> , 2003 , 770-777	0.9	16
7	Patient setup error measurement using 3D intensity-based image registration techniques. <i>International Journal of Radiation Oncology Biology Physics</i> , 2003 , 56, 259-65	4	49
6	Kernel Based Image Classification. <i>Lecture Notes in Computer Science</i> , 2001 , 369-375	0.9	1
5	Geometrical Transformation Approximation for 2D/3D Intensity-Based Registration of Portal Images and CT Scan. <i>Lecture Notes in Computer Science</i> , 2001 , 532-540	0.9	8
4	ARAMIS: A Remote Access Medical Imaging System. <i>Lecture Notes in Computer Science</i> , 1999 , 55-60	0.9	1
3	A linear algorithm for constructing the polygon adjacency relation in iso-surfaces of 3D images. <i>Lecture Notes in Computer Science</i> , 1997 , 125-136	0.9	
2	Fast 3D image transformations for registration procedures		2
1	Convergence speed of deformable models		1