

# Jean Michel Ltang

## 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.

103  
papers

2,315  
citations

24  
h-index

46  
g-index

121  
ext. papers

2,752  
ext. citations

3.1  
avg, IF

4.69  
L-index

#	Paper	IF	Citations
103	Characterization of internal fatigue cracks in aluminum alloys by simulation of phase contrast tomography.. <i>Scientific Reports</i> , <b>2022</b> , 12, 5981	4.9	0
102	A new hybrid next-event estimator for photon-based Monte Carlo dose rate calculations. <i>European Physical Journal Plus</i> , <b>2021</b> , 136, 1	3.1	0
101	Use of fast realistic simulations on GPU to extract CAD models from microtomographic data in the presence of strong CT artefacts. <i>Precision Engineering</i> , <b>2021</b> , 74, 110-110	2.9	1
100	Artificial Intelligence for Monte Carlo Simulation in Medical Physics. <i>Frontiers in Physics</i> , <b>2021</b> , 9,	3.9	1
99	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> , <b>2021</b> , 66,	3.8	1
98	A time-of-flight-based reconstruction for real-time prompt-gamma imaging in proton therapy. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	1
97	Region-of-Interest CT Reconstruction using Object Extent and Singular Value Decomposition. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , <b>2021</b> , 1-1	4.2	
96	Modeling complex particles phase space with GAN for Monte Carlo SPECT simulations: a proof of concept. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66, 055014	3.8	3
95	Evaluation of simulators for x-ray speckle-based phase contrast imaging. <i>Physics in Medicine and Biology</i> , <b>2021</b> , 66,	3.8	2
94	Influence of Doppler broadening model accuracy in Compton camera list-mode MLEM reconstruction. <i>Inverse Problems in Science and Engineering</i> , <b>2021</b> , 29, 3509-3529	1.3	0
93	A comparison of direct reconstruction algorithms in proton computed tomography. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 105010	3.8	5
92	2D directional ramp filter. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 08NT01	3.8	2
91	Ultra-fast prompt gamma detection in single proton counting regime for range monitoring in particle therapy. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 245033	3.8	7
90	Scatter Correction for Spectral CT Using a Primary Modulator Mask. <i>IEEE Transactions on Medical Imaging</i> , <b>2020</b> , 39, 2267-2276	11.7	2
89	Towards Monte Carlo simulation of X-ray phase contrast using GATE. <i>Optics Express</i> , <b>2020</b> , 28, 14522-14535	3.5	10
88	On the Role of Single Particle Irradiation and Fast Timing for Efficient Online-Control in Particle Therapy. <i>Frontiers in Physics</i> , <b>2020</b> , 8,	3.9	4
87	Scattering proton CT. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 225015	3.8	4

86	CCMod: a GATE module for Compton camera imaging simulation. <i>Physics in Medicine and Biology</i> , <b>2020</b> , 65, 055004	3.8	4
85	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> , <b>2020</b> , 4, 479-488	4.2	3
84	. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , <b>2020</b> , 4, 218-232	4.2	15
83	Polynomial modelling of proton trajectories in homogeneous media for fast most likely path estimation and trajectory simulation. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 195014	3.8	5
82	Generative adversarial networks (GAN) for compact beam source modelling in Monte Carlo simulations. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 215004	3.8	8
81	Effects of transverse heterogeneities on the most likely path of protons. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 065003	3.8	6
80	A 100 ps TOF Detection System for On-Line Range-Monitoring in Hadrontherapy <b>2019</b> ,		1
79	Breast density and iodine quantification in spectral mammography. <i>Biomedical Physics and Engineering Express</i> , <b>2018</b> , 4, 015008	1.5	1
78	Fixed forced detection for fast SPECT Monte-Carlo simulation. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 055011	3.8	5
77	Large surface gamma cameras for medical imaging: characterization of the bismuth germanate blocks. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P08018-P08018	1	2
76	A comprehensive theoretical comparison of proton imaging set-ups in terms of spatial resolution. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 135013	3.8	16
75	Prompt-gamma monitoring in hadrontherapy: A review. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2018</b> , 878, 58-73	1.2	105
74	Learning SPECT detector angular response function with neural network for accelerating Monte-Carlo simulations. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 205013	3.8	6
73	Total variation and point spread function priors for MLEM reconstruction in Compton camera imaging <b>2018</b> ,		1
72	Neutron track length estimator for GATE Monte Carlo dose calculation in radiotherapy. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 125018	3.8	0
71	Deriving the mean excitation energy map from dual-energy and proton computed tomography. <i>Physics and Imaging in Radiation Oncology</i> , <b>2018</b> , 6, 20-24	3.1	2
70	Characterizing the behavior of scattered radiation in multi-energy x-ray imaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2017</b> , 850, 25-34	1.2	4
69	A cost-effective monitoring technique in particle therapy via uncollimated prompt gamma peak integration. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 154102	3.4	30

68	Compton camera study for high efficiency SPECT and benchmark with Anger system. <i>Physics in Medicine and Biology</i> , <b>2017</b> , 62, 8794-8812	3.8	25
67	Comparison of projection- and image-based methods for proton stopping power estimation using dual energy CT. <i>Physics and Imaging in Radiation Oncology</i> , <b>2017</b> , 3, 28-36	3.1	16
66	Optimization of dual-energy CT acquisitions for proton therapy using projection-based decomposition. <i>Medical Physics</i> , <b>2017</b> , 44, 4548-4558	4.4	7
65	Convolution-based scatter correction using kernels combining measurements and Monte Carlo simulations. <i>Journal of X-Ray Science and Technology</i> , <b>2017</b> ,	2.1	5
64	Versatile Compton Camera for High-energy Gamma Rays: Monte Carlo Comparison with Anger Camera for Medical Imaging. <i>Acta Physica Polonica B</i> , <b>2017</b> , 48, 1639	1.9	2
63	Experimental validation of a multi-energy x-ray adapted scatter separation method. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 8625-8639	3.8	3
62	CHARACTERISING THE EOS SLOT-SCANNING SYSTEM WITH THE EFFECTIVE DETECTIVE QUANTUM EFFICIENCY. <i>Radiation Protection Dosimetry</i> , <b>2016</b> , 169, 319-24	0.9	3
61	A novel scatter separation method for multi-energy x-ray imaging. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 4711-28	3.8	10
60	Scattering correction using continuously thickness-adapted kernels. <i>NDT and E International</i> , <b>2016</b> , 78, 52-60	4.1	9
59	Assessment of Geant4 Prompt-Gamma Emission Yields in the Context of Proton Therapy Monitoring. <i>Frontiers in Oncology</i> , <b>2016</b> , 6, 10	5.3	15
58	Separable scatter model of the detector and object contributions using continuously thickness-adapted kernels in CBCT. <i>Journal of X-Ray Science and Technology</i> , <b>2016</b> , 24, 723-732	2.1	1
57	Accelerated prompt gamma estimation for clinical proton therapy simulations. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 7725-7743	3.8	9
56	Technical Note: Procedure for the calibration and validation of kilo-voltage cone-beam CT models. <i>Medical Physics</i> , <b>2016</b> , 43, 5199	4.4	5
55	Filtered back-projection reconstruction for attenuation proton CT along most likely paths. <i>Physics in Medicine and Biology</i> , <b>2016</b> , 61, 3258-78	3.8	10
54	Prompt-Gamma Monitoring of Proton- and Carbon-Therapy. Combined Development of Time-of-Flight Collimated- and Compton-Cameras. <i>Acta Physica Polonica A</i> , <b>2015</b> , 127, 1445-1448	0.6	
53	Development of a Compton camera for medical applications based on silicon strip and scintillation detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2015</b> , 787, 98-101	1.2	66
52	Collimated prompt gamma TOF measurements with multi-slit multi-detector configurations. <i>Journal of Instrumentation</i> , <b>2015</b> , 10, P01011-P01011	1	23
51	Monte Carlo comparison of x-ray and proton CT for range calculations of proton therapy beams. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 7585-99	3.8	34

50	Technical Note: Experimental carbon ion range verification in inhomogeneous phantoms using prompt gammas. <i>Medical Physics</i> , <b>2015</b> , 42, 2342-6	4.4	13
49	Fast scattering simulation tool for multi-energy x-ray imaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2015</b> , 802, 60-66	1.2	6
48	Monte Carlo simulation of prompt $\gamma$ -ray emission in proton therapy using a specific track length estimator. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 8067-86	3.8	6
47	A track length estimator method for dose calculations in low-energy X-ray irradiations: implementation, properties and performance. <i>Zeitschrift Fur Medizinische Physik</i> , <b>2015</b> , 25, 36-47	7.6	10
46	Absolute prompt-gamma yield measurements for ion beam therapy monitoring. <i>Physics in Medicine and Biology</i> , <b>2015</b> , 60, 565-94	3.8	37
45	Real-time proton beam range monitoring by means of prompt-gamma detection with a collimated camera. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 1327-38	3.8	46
44	Assessment and improvements of Geant4 hadronic models in the context of prompt-gamma hadrontherapy monitoring. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 1747-72	3.8	29
43	A review of the use and potential of the GATE Monte Carlo simulation code for radiation therapy and dosimetry applications. <i>Medical Physics</i> , <b>2014</b> , 41, 064301	4.4	219
42	Fast scattering simulation tool for multi-energy x-ray imaging <b>2014</b> ,		1
41	Influence of scattering on material quantification using multi-energy x-ray imaging <b>2014</b> ,		5
40	Design optimisation of a TOF-based collimated camera prototype for online hadrontherapy monitoring. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 7653-74	3.8	52
39	Split exponential track length estimator for Monte-Carlo simulations of small-animal radiation therapy. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 7703-15	3.8	17
38	Machine learning-based patient specific prompt-gamma dose monitoring in proton therapy. <i>Physics in Medicine and Biology</i> , <b>2013</b> , 58, 4563-77	3.8	46
37	Real-time online monitoring of the ion range by means of prompt secondary radiations <b>2013</b> ,		2
36	Low Statistics Reconstruction of the Compton Camera Point Spread Function in 3D Prompt- $\gamma$ Imaging of Ion Beam Therapy. <i>IEEE Transactions on Nuclear Science</i> , <b>2013</b> , 60, 3355-3363	1.7	14
35	An efficient numerical tool for dose deposition prediction applied to synchrotron medical imaging and radiation therapy. <i>Journal of Synchrotron Radiation</i> , <b>2013</b> , 20, 785-92	2.4	16
34	Filtered backprojection proton CT reconstruction along most likely paths. <i>Medical Physics</i> , <b>2013</b> , 40, 031103	4.4	61
33	Interaction vertex imaging (IVI) for carbon ion therapy monitoring: a feasibility study. <i>Physics in Medicine and Biology</i> , <b>2012</b> , 57, 4655-69	3.8	71

32	Secondary radiations in cone-beam computed tomography: simulation study. <i>Journal of Electronic Imaging</i> , <b>2012</b> , 21, 021113	0.7	2
31	Design Study of the Absorber Detector of a Compton Camera for On-Line Control in Ion Beam Therapy. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 1850-1855	1.7	19
30	Design of a Compton camera for 3D prompt- imaging during ion beam therapy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2011</b> , 648, S20-S23	1.2	63
29	Design Guidelines for a Double Scattering Compton Camera for Prompt- $\gamma$ Imaging During Ion Beam Therapy: A Monte Carlo Simulation Study. <i>IEEE Transactions on Nuclear Science</i> , <b>2011</b> , 58, 87-94	1.7	78
28	<b>2011</b> ,		1
27	. <i>IEEE Transactions on Nuclear Science</i> , <b>2010</b> , 57, 2768-2772	1.7	23
26	Real-time monitoring of the Bragg-peak position in ion therapy by means of single photon detection. <i>Radiation and Environmental Biophysics</i> , <b>2010</b> , 49, 337-43	2	74
25	SU-GG-I-120: Joint Simulation of Transmission X-Ray Imaging on GPU and Patient's Respiration on CPU. <i>Medical Physics</i> , <b>2010</b> , 37, 3129-3129	4.4	
24	Simulation of dose deposition in stereotactic synchrotron radiation therapy: a fast approach combining Monte Carlo and deterministic algorithms. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 4671-85	3.8	9
23	Design study of a Compton camera for prompt $\gamma$ imaging during ion beam therapy <b>2009</b> ,		6
22	Dose profile monitoring with carbon ions by means of prompt-gamma measurements. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2009</b> , 267, 993-996	1.2	68
21	. <i>IEEE Transactions on Nuclear Science</i> , <b>2008</b> , 55, 1008-1017	1.7	11
20	Monitoring the Bragg peak location of 73MeV $\gamma$ carbon ions by means of prompt $\gamma$ measurements. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 093506	3.4	113
19	A beam stop based correction procedure for high spatial frequency scatter in industrial cone-beam X-ray CT. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2008</b> , 266, 4042-4054	1.2	17
18	Simulation Study of the Role Played by Intensifying or Support Layers in Scintillation Screens. <i>IEEE Transactions on Nuclear Science</i> , <b>2007</b> , 54, 699-705	1.7	1
17	Characterization and simulation of microstructure and properties of EPS lightweight concrete. <i>Cement and Concrete Research</i> , <b>2007</b> , 37, 1666-1673	10.3	106
16	Measurement and Monte Carlo modeling of the spatial response of scintillation screens. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2007</b> , 581, 719-727	1.2	2
15	Fast dose calculation for stereotactic synchrotron radiotherapy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 3914-7		1

14	Geant4 simulation of the response of phosphor screens for X-ray imaging. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , <b>2006</b> , 563, 196-199	1.2	9
13	Fast and robust ray casting algorithms for virtual X-ray imaging. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2006</b> , 248, 175-180	1.2	25
12	A hybrid approach to Simulate X-ray imaging techniques, combining Monte Carlo and deterministic algorithms. <i>IEEE Transactions on Nuclear Science</i> , <b>2005</b> , 52, 1329-1334	1.7	12
11	A hybrid approach to simulate multiple photon scattering in X-ray imaging. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2005</b> , 227, 551-558	1.2	21
10	Investigation of artefact sources in synchrotron microtomography via virtual X-ray imaging. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2005</b> , 234, 333-348	1.2	43
9	Signal-to-noise ratio criterion for the optimization of dual-energy acquisition using virtual x-ray imaging: application to glass wool. <i>Journal of Electronic Imaging</i> , <b>2004</b> , 13, 436	0.7	7
8	Deterministic simulation of first-order scattering in virtual X-ray imaging. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , <b>2004</b> , 222, 285-300	1.2	32
7	Quantitative microtomography: measurement of density distribution in glass wool and local evolution during a one-dimensional compressive load. <i>Measurement Science and Technology</i> , <b>2003</b> , 14, 410-420	2	9
6	Optimal calibration via virtual x-ray imaging for dual-energy techniques: application to glass wool <b>2003</b> ,		2
5	X-ray tomography applied to the characterization of cellular materials. Related finite element modeling problems. <i>Composites Science and Technology</i> , <b>2003</b> , 63, 2431-2443	8.6	172
4	On-line X-ray focal spot assessment based on deconvolution using standard imaging devices. <i>NDT and E International</i> , <b>2003</b> , 36, 303-317	4.1	6
3	On the Application of X-ray Microtomography in the Field of Materials Science. <i>Advanced Engineering Materials</i> , <b>2001</b> , 3, 539	3.5	226
2	Stereokinematic analysis of visual data in active convergent stereoscopy. <i>Robotics and Autonomous Systems</i> , <b>1998</b> , 25, 43-71	3.5	3
1			1