

# Guillem Pratx

## List of Publications by Citations

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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.

123  
papers

2,632  
citations

29  
h-index

47  
g-index

140  
ext. papers

3,158  
ext. citations

6.6  
avg, IF

5.61  
L-index

#	Paper	IF	Citations
123	GPU computing in medical physics: a review. <i>Medical Physics</i> , <b>2011</b> , 38, 2685-97	4.4	195
122	X-ray luminescence computed tomography via selective excitation: a feasibility study. <i>IEEE Transactions on Medical Imaging</i> , <b>2010</b> , 29, 1992-9	11.7	120
121	Tomographic molecular imaging of x-ray-excitable nanoparticles. <i>Optics Letters</i> , <b>2010</b> , 35, 3345-7	3	114
120	Synthesis and radioluminescence of PEGylated Eu(3+) -doped nanophosphors as bioimaging probes. <i>Advanced Materials</i> , <b>2011</b> , 23, H195-9	24	107
119	Development and MPI tracking of novel hypoxia-targeted theranostic exosomes. <i>Biomaterials</i> , <b>2018</b> , 177, 139-148	15.6	94
118	X-ray-induced shortwave infrared biomedical imaging using rare-earth nanoprobos. <i>Nano Letters</i> , <b>2015</b> , 15, 96-102	11.5	92
117	Intraoperative imaging of tumors using Cerenkov luminescence endoscopy: a feasibility experimental study. <i>Journal of Nuclear Medicine</i> , <b>2012</b> , 53, 1579-84	8.9	91
116	Hybrid x-ray/optical luminescence imaging: characterization of experimental conditions. <i>Medical Physics</i> , <b>2010</b> , 37, 4011-8	4.4	80
115	Fast, accurate and shift-varying line projections for iterative reconstruction using the GPU. <i>IEEE Transactions on Medical Imaging</i> , <b>2009</b> , 28, 435-45	11.7	76
114	Nanoscintillator-Mediated X-Ray Induced Photodynamic Therapy for Deep-Seated Tumors: From Concept to Biomedical Applications. <i>Theranostics</i> , <b>2020</b> , 10, 1296-1318	12.1	69
113	A computational model of radiolytic oxygen depletion during FLASH irradiation and its effect on the oxygen enhancement ratio. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 185005	3.8	68
112	First demonstration of multiplexed X-ray fluorescence computed tomography (XFCT) imaging. <i>IEEE Transactions on Medical Imaging</i> , <b>2013</b> , 32, 262-7	11.7	63
111	Investigation of X-ray fluorescence computed tomography (XFCT) and K-edge imaging. <i>IEEE Transactions on Medical Imaging</i> , <b>2012</b> , 31, 1620-7	11.7	63
110	Fully 3D list-mode time-of-flight PET image reconstruction on GPUs using CUDA. <i>Medical Physics</i> , <b>2011</b> , 38, 6775-86	4.4	58
109	Bayesian reconstruction of photon interaction sequences for high-resolution PET detectors. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 5073-94	3.8	50
108	Imaging metabolic heterogeneity in cancer. <i>Molecular Cancer</i> , <b>2016</b> , 15, 4	42.1	48
107	Radioluminescent nanophosphors enable multiplexed small-animal imaging. <i>Optics Express</i> , <b>2012</b> , 20, 11598-604	3.3	47

106	X-ray acoustic computed tomography with pulsed x-ray beam from a medical linear accelerator. <i>Medical Physics</i> , <b>2013</b> , 40, 010701	4.4	46
105	X-Ray Luminescence and X-Ray Fluorescence Computed Tomography: New Molecular Imaging Modalities. <i>IEEE Access</i> , <b>2014</b> , 2, 1051-1061	3.5	43
104	Radioluminescence microscopy: measuring the heterogeneous uptake of radiotracers in single living cells. <i>PLoS ONE</i> , <b>2012</b> , 7, e46285	3.7	41
103	Ultra-High-Dose-Rate FLASH Irradiation May Spare Hypoxic Stem Cell Niches in Normal Tissues. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2019</b> , 105, 190-192	4	38
102	Droplet Microfluidic Platform for the Determination of Single-Cell Lactate Release. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 3257-63	7.8	37
101	High-resolution radioluminescence microscopy of 18F-FDG uptake by reconstructing the Ionization track. <i>Journal of Nuclear Medicine</i> , <b>2013</b> , 54, 1841-6	8.9	36
100	Hard X-ray-induced optical luminescence via biomolecule-directed metal clusters. <i>Chemical Communications</i> , <b>2014</b> , 50, 3549-51	5.8	35
99	Limited-angle x-ray luminescence tomography: methodology and feasibility study. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 3487-502	3.8	35
98	Toward real-time Monte Carlo simulation using a commercial cloud computing infrastructure. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, N175-81	3.8	34
97	Clinical evaluation of a novel intraoperative handheld gamma camera for sentinel lymph node biopsy. <i>Physica Medica</i> , <b>2014</b> , 30, 340-5	2.7	33
96	Modular low-light microscope for imaging cellular bioluminescence and radioluminescence. <i>Nature Protocols</i> , <b>2017</b> , 12, 1055-1076	18.8	32
95	Cerenkov luminescence endoscopy: improved molecular sensitivity with $\beta$ -emitting radiotracers. <i>Journal of Nuclear Medicine</i> , <b>2014</b> , 55, 1905-9	8.9	31
94	Bright Lu O :Eu Thin-Film Scintillators for High-Resolution Radioluminescence Microscopy. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2064-2070	10.1	29
93	Ultrafast and scalable cone-beam CT reconstruction using MapReduce in a cloud computing environment. <i>Medical Physics</i> , <b>2011</b> , 38, 6603-9	4.4	29
92	Radioluminescence in biomedicine: physics, applications, and models. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 04TR01	3.8	29
91	Toward a Droplet-Based Single-Cell Radiometric Assay. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 6472-6481	7.8	26
90	Convex optimization of coincidence time resolution for a high-resolution PET system. <i>IEEE Transactions on Medical Imaging</i> , <b>2011</b> , 30, 391-400	11.7	26
89	X-ray excitable luminescent polymer dots doped with an iridium(III) complex. <i>Chemical Communications</i> , <b>2013</b> , 49, 4319-21	5.8	25

88	Development of XFCT imaging strategy for monitoring the spatial distribution of platinum-based chemodrugs: instrumentation and phantom validation. <i>Medical Physics</i> , <b>2013</b> , 40, 030701	4.4	25
87	Fast List-Mode Reconstruction for Time-of-Flight PET Using Graphics Hardware. <i>IEEE Transactions on Nuclear Science</i> , <b>2011</b> , 58, 105-109	1.7	23
86	Whole-body tracking of single cells via positron emission tomography. <i>Nature Biomedical Engineering</i> , <b>2020</b> , 4, 835-844	19	21
85	L-shell x-ray fluorescence computed tomography (XFCT) imaging of Cisplatin. <i>Physics in Medicine and Biology</i> , <b>2014</b> , 59, 219-32	3.8	21
84	Online detector response calculations for high-resolution PET image reconstruction. <i>Physics in Medicine and Biology</i> , <b>2011</b> , 56, 4023-40	3.8	21
83	Efficient Radioisotope Energy Transfer by Gold Nanoclusters for Molecular Imaging. <i>Small</i> , <b>2015</b> , 11, 4002-8	11	20
82	Seeing the invisible: direct visualization of therapeutic radiation beams using air scintillation. <i>Medical Physics</i> , <b>2014</b> , 41, 010702	4.4	20
81	Monte Carlo simulation of photon migration in a cloud computing environment with MapReduce. <i>Journal of Biomedical Optics</i> , <b>2011</b> , 16, 125003	3.5	20
80	Effects of multiple-interaction photon events in a high-resolution PET system that uses 3-D positioning detectors. <i>Medical Physics</i> , <b>2010</b> , 37, 5494-508	4.4	19
79	Facile Synthesis of Amine-Functionalized Eu(3+)-Doped La(OH) <sub>3</sub> Nanophosphors for Bioimaging. <i>Nanoscale Research Letters</i> , <b>2011</b> , 6, 24	5	19
78	Lactic Acid Accumulation in the Tumor Microenvironment Suppresses F-FDG Uptake. <i>Cancer Research</i> , <b>2019</b> , 79, 410-419	10.1	18
77	A gold nanoparticle system for the enhancement of radiotherapy and simultaneous monitoring of reactive-oxygen-species formation. <i>Nanotechnology</i> , <b>2018</b> , 29, 504001	3.4	17
76	Is Cherenkov luminescence bright enough for photodynamic therapy?. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 354	28.7	16
75	Single-Cell Analysis of [18F]Fluorodeoxyglucose Uptake by Droplet Radiofluidics. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 6667-73	7.8	15
74	Fully 3-D List-Mode OSEM Accelerated by Graphics Processing Units <b>2006</b> ,		15
73	Lanthanide Metal-Organic Frameworks for Multispectral Radioluminescent Imaging. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 26943-26954	9.5	15
72	ERadioluminescence Imaging: A Comparative Evaluation with Cerenkov Luminescence Imaging. <i>Journal of Nuclear Medicine</i> , <b>2015</b> , 56, 1458-64	8.9	14
71	Distributed MLEM: an iterative tomographic image reconstruction algorithm for distributed memory architectures. <i>IEEE Transactions on Medical Imaging</i> , <b>2013</b> , 32, 957-67	11.7	14

70	Single-Cell Characterization of <sup>18</sup> F-FLT Uptake with Radioluminescence Microscopy. <i>Journal of Nuclear Medicine</i> , <b>2016</b> , 57, 1136-40	8.9	14
69	Single-cell tracking with PET using a novel trajectory reconstruction algorithm. <i>IEEE Transactions on Medical Imaging</i> , <b>2015</b> , 34, 994-1003	11.7	13
68	Multiscale Framework for Imaging Radiolabeled Therapeutics. <i>Molecular Pharmaceutics</i> , <b>2015</b> , 12, 4554-60	9.0	13
67	Modular platform for low-light microscopy. <i>Biomedical Optics Express</i> , <b>2015</b> , 6, 4585-98	3.5	13
66	GRAY: High Energy Photon Ray Tracer for PET Applications <b>2006</b> ,		12
65	Identification of Lymphatic and Hematogenous Routes of Rapidly Labeled Radioactive and Fluorescent Exosomes through Highly Sensitive Multimodal Imaging. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,	6.3	12
64	Detection and quantitation of circulating tumor cell dynamics by bioluminescence imaging in an orthotopic mammary carcinoma model. <i>PLoS ONE</i> , <b>2014</b> , 9, e105079	3.7	11
63	Multicellular Spheroids as In Vitro Models of Oxygen Depletion During FLASH Irradiation. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2021</b> , 110, 833-844	4	11
62	PEGylated [NaGdF <sub>4</sub> ]/[email protected] <sub>2</sub> Core/Shell Nanophosphors for Enhanced Radioluminescence and Folate Receptor Targeting. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 3718-3727	5.6	10
61	Multiplexed Single-Cell Measurements of FDG Uptake and Lactate Release Using Droplet Microfluidics. <i>Technology in Cancer Research and Treatment</i> , <b>2019</b> , 18, 1533033819841066	2.7	10
60	Evaluation of a BGO-Based PET System for Single-Cell Tracking Performance by Simulation and Phantom Studies. <i>Molecular Imaging</i> , <b>2016</b> , 15,	3.7	9
59	Performance evaluation of F radioluminescence microscopy using computational simulation. <i>Medical Physics</i> , <b>2017</b> , 44, 1782-1795	4.4	8
58	Fiber-optic system for dual-modality imaging of glucose probes <sup>18</sup> F-FDG and <sup>6</sup> NBDG in atherosclerotic plaques. <i>PLoS ONE</i> , <b>2014</b> , 9, e108108	3.7	8
57	Toward IMRT 2D dose modeling using artificial neural networks: a feasibility study. <i>Medical Physics</i> , <b>2011</b> , 38, 5807-17	4.4	8
56	Instant labeling of therapeutic cells for multimodality imaging. <i>Theranostics</i> , <b>2020</b> , 10, 6024-6034	12.1	7
55	Nuclear-targeted gold nanoparticles enhance cancer cell radiosensitization. <i>Nanotechnology</i> , <b>2020</b> , 31, 415102	3.4	7
54	Single-Cell Imaging Using Radioluminescence Microscopy Reveals Unexpected Binding Target for [ <sup>18</sup> F]HFB. <i>Molecular Imaging and Biology</i> , <b>2018</b> , 20, 378-387	3.8	7
53	Accurately positioning events in a high-resolution PET system that uses 3D CZT detectors <b>2007</b> ,		6

52	High-Z Metal-Organic Frameworks for X-ray Radiation-Based Cancer Theranostics. <i>Chemistry - A European Journal</i> , <b>2021</b> , 27, 3229-3237	4.8	6
51	Endoscopic detection of cancer with lensless radioluminescence imaging and machine vision. <i>Scientific Reports</i> , <b>2016</b> , 6, 30737	4.9	5
50	X-ray induced photoacoustic tomography <b>2013</b> ,		5
49	3-D Tomographic Image Reconstruction from Randomly Ordered Lines with CUDA <b>2011</b> , 679-691		5
48	Measurement-based spatially-varying point spread function for list-mode PET reconstruction on GPU <b>2011</b> ,		5
47	Flexible radioluminescence imaging for FDG-guided surgery. <i>Medical Physics</i> , <b>2016</b> , 43, 5298	4.4	5
46	In silico optimization of radioluminescence microscopy. <i>Journal of Biophotonics</i> , <b>2018</b> , 11, e201700138	3.1	4
45	<b>2011</b> ,		4
44	Tb-Doped core-shell-shell nanophosphors for enhanced X-ray induced luminescence and sensitization of radiodynamic therapy. <i>Biomaterials Science</i> , <b>2021</b> , 9, 496-505	7.4	4
43	A tale of two photons: radioluminescence and its application in molecular imaging <b>2017</b> ,		3
42	TH-A-141-02: X-Ray Acoustic Computed Tomography: Concept and Design. <i>Medical Physics</i> , <b>2013</b> , 40, 522-522	4.4	3
41	Noninvasive and Highly Multiplexed Five-Color Tumor Imaging of Multicore Near-Infrared Resonant Surface-Enhanced Raman Nanoparticles. <i>ACS Nano</i> , <b>2021</b> ,	16.7	3
40	Radioluminescence Microscopy: A Quantitative Method for Radioisotopic Imaging of Metabolic Fluxes in Living Cancer Cells. <i>Methods in Molecular Biology</i> , <b>2019</b> , 1928, 45-53	1.4	2
39	Dependence of fluorodeoxyglucose (FDG) uptake on cell cycle and dry mass: a single-cell study using a multi-modal radiography platform. <i>Scientific Reports</i> , <b>2020</b> , 10, 4280	4.9	2
38	In Regard to Yoon et al. <i>International Journal of Radiation Oncology Biology Physics</i> , <b>2018</b> , 101, 494-495	4	2
37	Flexible optically stimulated luminescence band for 1D in vivo radiation dosimetry. <i>Physics in Medicine and Biology</i> , <b>2018</b> , 63, 165006	3.8	2
36	Convex optimization of coincidence time resolution for high resolution PET systems <b>2008</b> ,		2
35	High-resolution positron emission microscopy of patient-derived tumor organoids		2

34	Microfluidics-Coupled Radioluminescence Microscopy for Radiotracer Kinetic Studies. <i>Analytical Chemistry</i> , <b>2021</b> , 93, 4425-4433	7.8	2
33	High-resolution radioluminescence microscopy of FDG uptake in an engineered 3D tumor-stoma model. <i>European Journal of Nuclear Medicine and Molecular Imaging</i> , <b>2021</b> , 48, 3400-3407	8.8	2
32	Upconversion Luminescence Imaging of Tumors with EGFR-Affibody Conjugated Nanophosphors. <i>MRS Advances</i> , <b>2019</b> , 4, 2461-2470	0.7	2
31	Fully 3-D list-mode positron emission tomography image reconstruction on GPU using CUDA <b>2010</b> ,		1
30	TU-A-301-08: X-Ray Stimulated Fluorescence for Breast Imaging. <i>Medical Physics</i> , <b>2011</b> , 38, 3746-3746	4.4	1
29	Simultaneous dose and dose rate optimization (SDDRO) of the FLASH effect for pencil-beam-scanning proton therapy. <i>Medical Physics</i> , <b>2021</b> ,	4.4	1
28	High-resolution radioluminescence microscopy of FDG uptake in an engineered 3D tumor-stoma model		1
27	CellGPS: Whole-body tracking of single cells by positron emission tomography		1
26	High-resolution positron emission microscopy of patient-derived tumor organoids. <i>Nature Communications</i> , <b>2021</b> , 12, 5883	17.4	0
25	Flow radiocytometry using droplet optofluidics. <i>Biosensors and Bioelectronics</i> , <b>2021</b> , 194, 113565	11.8	0
24	Hard X-ray excited optical luminescence from protein-directed Au clusters.. <i>RSC Advances</i> , <b>2020</b> , 10, 13824-13829	3.7	0
23	Single-cell radioluminescence microscopy with two-fold higher sensitivity using dual scintillator configuration. <i>PLoS ONE</i> , <b>2020</b> , 15, e0221241	3.7	0
22	Development and characterization of a scintillating cell imaging dish for radioluminescence microscopy. <i>Analyst, The</i> , <b>2018</b> , 143, 1862-1869	5	0
21	High-Resolution Radioluminescence Microscopy Image Reconstruction via Ionization Track Analysis. <i>IEEE Transactions on Radiation and Plasma Medical Sciences</i> , <b>2019</b> , 3, 660-667	4.2	0
20	TH-E-BRC-04: Monte-Carlo Simulation in a Cloud Computing Environment with MapReduce. <i>Medical Physics</i> , <b>2011</b> , 38, 3869-3869	4.4	0
19	High-performance computing in emission tomography. <i>Imaging in Medical Diagnosis and Therapy</i> , <b>2017</b> , 259-284		0
18	MO-E-204C-08: Characterization of Cerenkov Optical Irradiation from Radioactive Probes in Phantoms and Living Subjects. <i>Medical Physics</i> , <b>2010</b> , 37, 3358-3358	4.4	0
17	WE-E-204B-01: Development of an X-Ray/Optical Luminescence Imager for Improved X-Ray Contrast Sensitivity. <i>Medical Physics</i> , <b>2010</b> , 37, 3437-3437	4.4	0



16	MO-E-204C-05: X-Ray Luminescence Computed Tomography Via Selective X-Ray Excitation. <i>Medical Physics</i> , <b>2010</b> , 37, 3357-3358	4-4
15	WE-G-211-06: Multiplexed Radio Luminescence Imaging for Radiation Therapy. <i>Medical Physics</i> , <b>2011</b> , 38, 3836-3836	4-4
14	WE-G-211-05: Advances in X-Ray Luminescence Computed Tomography: Towards In-Vivo Imaging of Radioluminescent Nanophosphors. <i>Medical Physics</i> , <b>2011</b> , 38, 3836-3836	4-4
13	TU-A-BRA-04: Real-Time Metabolic Image-Guidance to Aid Intraoperative Radiation Therapy: Pilot Results in a Small-Animal Model. <i>Medical Physics</i> , <b>2012</b> , 39, 3888-3888	4-4
12	TH-A-213CD-02: BEST IN PHYSICS (IMAGING) - The Feasibility of Multiplexed Biomarker Detection Using X-Ray Stimulated Fluorescence Imaging. <i>Medical Physics</i> , <b>2012</b> , 39, 3986-3986	4-4
11	WE-C-217BCD-07: Best in Physics (Joint Eyiaging-Therapy) - Direct Imaging of the Uptake of Platinum Anticancer Agents Using X-Ray Stimulated Fluorescence: A Proof-Of-Concept Study. <i>Medical Physics</i> , <b>2012</b> , 39, 3950-3951	4-4
10	TH-A-213CD-01: Compton Scatter in X-Ray Fluorescence CT Imaging. <i>Medical Physics</i> , <b>2012</b> , 39, 3986-3986	4-4
9	MO-D-141-06: Multiscale PET/Cerenkov Image-Guided Surgery: Demonstration in An Invasive Mouse Tumor Model. <i>Medical Physics</i> , <b>2013</b> , 40, 400-400	4-4
8	MO-D-141-07: X-Ray Activated Gold Nanoparticles for Tumor-Specific Molecular Imaging. <i>Medical Physics</i> , <b>2013</b> , 40, 400-400	4-4
7	TH-E-103-01: Nanotechnology & Molecular Imaging. <i>Medical Physics</i> , <b>2013</b> , 40, 550-550	4-4
6	TH-A-141-03: High-Sensitivity L-Shell X-Ray Fluorescence CT Imaging of Cisplatin. <i>Medical Physics</i> , <b>2013</b> , 40, 523-523	4-4
5	Mechanoporation enables rapid and efficient radiolabeling of stem cells for PET imaging.. <i>Scientific Reports</i> , <b>2022</b> , 12, 2955	4-9
4	Single-cell radioluminescence microscopy with two-fold higher sensitivity using dual scintillator configuration <b>2020</b> , 15, e0221241	
3	Single-cell radioluminescence microscopy with two-fold higher sensitivity using dual scintillator configuration <b>2020</b> , 15, e0221241	
2	Single-cell radioluminescence microscopy with two-fold higher sensitivity using dual scintillator configuration <b>2020</b> , 15, e0221241	
1	Single-cell radioluminescence microscopy with two-fold higher sensitivity using dual scintillator configuration <b>2020</b> , 15, e0221241	