Xavier Intes

List of Publications by Year
in descending order

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148	3,589	126708	155451
papers	citations	33	55
		h-index	g-index

160	160	160	2397
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Deep neural networks for the assessment of surgical skills: A systematic review. Journal of Defense Modeling and Simulation, 2022, 19, 159-171.	1.2	19
2	Macroscopic Fluorescence Lifetime Imaging for Monitoring of Drugâ€“Target Engagement. Methods in Molecular Biology, 2022, 2394, 837-856.	0.4	7
3	Deep learning in macroscopic diffuse optical imaging. Journal of Biomedical Optics, 2022, 27, .	1.4	16
4	3D k-space reflectance fluorescence tomography via deep learning. Optics Letters, 2022, 47, 1533.	1.7	8
5	In vitro and in vivo NIR fluorescence lifetime imaging with a time-gated SPAD camera. Optica, 2022, 9, 532.	4.8	15
6	Monte Carlo-based data generation for efficient deep learning reconstruction of macroscopic diffuse optical tomography and topography applications. Journal of Biomedical Optics, 2022, 27, .	1.4	9
7	Deep learning-based motion artifact removal in functional near-infrared spectroscopy. Neurophotonics, 2022, 9, 041406.	1.7	10
8	System Characterization of Time-domain Mesoscopic Fluorescence Molecular Tomography. , 2022, , .		0
9	Wide-field Diffuse Optical Tomography Using Deep Learning. , 2022, , .		1
10	Monte-Carlo based data generator for Deep Learning applications. , 2022, , .		0
11	Characterization of a large Gated SPAD camera for in vivo Macroscopic Fluorescence Lifetime Imaging. , 2022, , .		0
12	Efference information flow during skill acquisition mediates its interaction with medical simulation technology. , 2022, , .		2
13	Functional Brain Imaging Reliably Predicts Bimanual Motor Skill Performance in a Standardized Surgical Task. IEEE Transactions on Biomedical Engineering, 2021, 68, 2058-2066.	2.5	17
14	Interhemispheric Functional Connectivity in the Primary Motor Cortex Distinguishes Between Training on a Physical and a Virtual Surgical Simulator. Lecture Notes in Computer Science, 2021, , 636-644.	1.0	2
15	Decreasing the Surgical Errors by Neurostimulation of Primary Motor Cortex and the Associated Brain Activation via Neuroimaging. Frontiers in Neuroscience, 2021, 15, 651192.	1.4	15
16	Monitoring receptor heterodimerization along intracellular trafficking pathways using anti-HER2 therapeutic antibodies. , 2021, , .		2
17	Functional brain connectivity related to surgical skill dexterity in physical and virtual simulation environments. Neurophotonics, 2021, 8, 015008.	1.7	12
18	Luminescence lifetime imaging of three-dimensional biological objects. Journal of Cell Science, 2021, 134, 1-17.	1.2	30

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19	Monitoring Receptor Heterodimerization along Intracellular Trafficking Pathways using Antiâ€HER2 Therapeutic Antibodies. FASEB Journal, 2021, 35, .	0.2	0
20	Deep Learning in Biomedical Optics. Lasers in Surgery and Medicine, 2021, 53, 748-775.	1.1	32
21	Accelerating vasculature imaging in tumor using mesoscopic fluorescence molecular tomography via a hybrid reconstruction strategy. Biochemical and Biophysical Research Communications, 2021, 562, 29-35.	1.0	7
22	Neuroimaging guided tES to facilitate complex laparoscopic surgical tasks â€“ insights from functional near-infrared spectroscopy. , 2021, 2021, 7437-7440.		5
23	Brain network effects related to physical and virtual surgical training revealed by Granger causality. , 2021, 2021, 1014-1017.		2
24	A machine learning approach to predict surgical learning curves. Surgery, 2020, 167, 321-327.	1.0	18
25	Non-Destructive Tumor Aggregate Morphology and Viability Quantification at Cellular Resolution, During Development and in Response to Drug. Acta Biomaterialia, 2020, 117, 322-334.	4.1	17
26	The Effects of Transcranial Electrical Stimulation on Human Motor Functions: A Comprehensive Review of Functional Neuroimaging Studies. Frontiers in Neuroscience, 2020, 14, 744.	1.4	13
27	Multiplexed non-invasive tumor imaging of glucose metabolism and receptor-ligand engagement using dark quencher FRET acceptor. Theranostics, 2020, 10, 10309-10325.	4.6	18
28	Quantification of Trastuzumabâ€“HER2 Engagement In Vitro and In Vivo. Molecules, 2020, 25, 5976.	1.7	16
29	Macroscopic fluorescence lifetime-based FÃ¶rster resonance energy transfer imaging for quantitative ligandâ€“receptor binding. , 2020, , 331-363.		1
30	High-resolution tomographic analysis of in vitro 3D glioblastoma tumor model under long-term drug treatment. Science Advances, 2020, 6, eaay7513.	4.7	60
31	UNMIX-ME: spectral and lifetime fluorescence unmixing via deep learning. Biomedical Optics Express, 2020, 11, 3857.	1.5	26
32	High compression deep learning based single-pixel hyperspectral macroscopic fluorescence lifetime imaging in vivo. Biomedical Optics Express, 2020, 11, 5401.	1.5	23
33	Real-time, wide-field and high-quality single snapshot imaging of optical properties with profile correction using deep learning. Biomedical Optics Express, 2020, 11, 5701.	1.5	34
34	A deep learning approach to remove motion artifacts in fNIRS data analysis. , 2020, , .		2
35	Accelerating Monte Carlo modeling of structured-light-based diffuse optical imaging via â€œphoton sharingâ€• Optics Letters, 2020, 45, 2842.	1.7	7
36	Macroscopic fluorescence lifetime topography enhanced via spatial frequency domain imaging. Optics Letters, 2020, 45, 4232.	1.7	17

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37	Monitoring the effect of transcranial Electric current Stimulation (tES) during a bimanual motor task via functional Near-InfraRed Spectroscopy (fNIRS). , 2020, , .		0
38	Hyperspectral Lifetime Unmixing via Deep Learning. , 2020, , .		0
39	Fast fit-free analysis of fluorescence lifetime imaging via deep learning. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24019-24030.	3.3	100
40	Net-FLICS: fast quantitative wide-field fluorescence lifetime imaging with compressed sensing â€“ a deep learning approach. Light: Science and Applications, 2019, 8, 26.	7.7	64
41	Laser-based 3D bioprinting for spatial and size control of tumor spheroids and embryoid bodies. Acta Biomaterialia, 2019, 95, 357-370.	4.1	102
42	Objective assessment of surgical skill transfer using non-invasive brain imaging. Surgical Endoscopy and Other Interventional Techniques, 2019, 33, 2485-2494.	1.3	15
43	In vitro and in vivo phasor analysis of stoichiometry and pharmacokinetics using shortâ€lifetime nearâ€infrared dyes and timeâ€gated imaging. Journal of Biophotonics, 2019, 12, e201800185.	1.1	31
44	System configuration optimization for mesoscopic fluorescence molecular tomography. Biomedical Optics Express, 2019, 10, 5660.	1.5	7
45	fNIRS as a Quantitative tool to Asses and Predict Surgical Skills. , 2019, , .		1
46	Fluorescent Lifetime Imaging improved via Deep Learning. , 2019, , .		1
47	Dynamic macroscopic in vivo FRET for the quantitative monitoring of targeted receptor engagement. , 2019, , .		1
48	Assessing bimanual motor skills with optical neuroimaging. Science Advances, 2018, 4, eaat3807.	4.7	59
49	Assessing patterns for compressive fluorescence lifetime imaging. Optics Letters, 2018, 43, 4370.	1.7	26
50	Deep compressive macroscopic fluorescence lifetime imaging. , 2018, , .		4
51	Quantitative imaging of receptor-ligand engagement in intact live animals. Journal of Controlled Release, 2018, 286, 451-459.	4.8	36
52	Improving mesoscopic fluorescence molecular tomography via preconditioning and regularization. Biomedical Optics Express, 2018, 9, 2765.	1.5	15
53	Comparison of illumination geometry for lifetimeâ€based measurements in wholeâ€body preclinical imaging. Journal of Biophotonics, 2018, 11, e201800037.	1.1	16
54	Review of structured light in diffuse optical imaging. Journal of Biomedical Optics, 2018, 24, 1.	1.4	72

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55	Direct approach to compute Jacobians for diffuse optical tomography using perturbation Monte Carlo-based photon â€œreplayâ€• Biomedical Optics Express, 2018, 9, 4588.	1.5	52
56	Hyperspectral wide-field time domain single-pixel diffuse optical tomography platform. Biomedical Optics Express, 2018, 9, 6258.	1.5	15
57	Quantitative Deep Tissue Imaging of Target Engagement in Intact Live Animals. FASEB Journal, 2018, 32, 818.1.	0.2	0
58	Radiative transfer with delta-Eddington-type phase functions. Applied Mathematics and Computation, 2017, 300, 70-78.	1.4	3
59	Dental optical tomography with upconversion nanoparticlesâ€”a feasibility study. Journal of Biomedical Optics, 2017, 22, 066001.	1.4	4
60	Fluorescence lifetime FRET imaging of receptor-ligand complexes in tumor cells in vitro and in vivo. Proceedings of SPIE, 2017, , .	0.8	5
61	Compressive hyperspectral time-resolved wide-field fluorescence lifetime imaging. Nature Photonics, 2017, 11, 411-414.	15.6	111
62	Improving mesoscopic fluorescence molecular tomography through data reduction. Biomedical Optics Express, 2017, 8, 3868.	1.5	11
63	Optical tomographic imaging for breast cancer detection. Journal of Biomedical Optics, 2017, 22, 1.	1.4	16
64	Compressive hyperspectral time-resolved wide-field fluorescence lifetime imaging. , 2017, , .		1
65	A Rapid Approach to Build Jacobians for Optical Tomography via Monte Carlo Method and Photon â€œReplayâ€• , 2017, , .		4
66	AlliGator: A Phasor Computational Platform for Fast in vivo Lifetime Analysis. , 2017, 2017, .		5
67	Generalized mesh-based Monte Carlo for wide-field illumination and detection via mesh retessellation. Biomedical Optics Express, 2016, 7, 171.	1.5	53
68	Mesoscopic Fluorescence Molecular Tomography for Evaluating Engineered Tissues. Annals of Biomedical Engineering, 2016, 44, 667-679.	1.3	42
69	Radiative transfer equation modeling by streamline diffusion modified continuous Galerkin method. Journal of Biomedical Optics, 2016, 21, 036003.	1.4	15
70	Sparse temporal sampling for fast time-domain wide-field fluorescence molecular tomography. Proceedings of SPIE, 2016, , .	0.8	0
71	Role of Tumor Heterogeneity in Imaging Breast Cancer Targeted Delivery using FLIM FRET in Vivo. , 2016, , .		1
72	Enabling wide-field illumination and detection in mesh-based Monte Carlo simulations. , 2016, , .		0

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73	Longitudinal Volumetric Assessment of Glioblastoma Brain Tumors in 3D Bio-Printed Environment by Mesoscopic Fluorescence Molecular Tomography. , 2016, , .		1
74	Objective Surgical Skill Differentiation for Physical and Virtual Surgical Trainers via Functional Near-Infrared Spectroscopy. Studies in Health Technology and Informatics, 2016, 220, 256-61.	0.2	0
75	Wide-field fluorescence molecular tomography with compressive sensing based preconditioning. Biomedical Optics Express, 2015, 6, 4887.	1.5	26
76	Assessment of Gate Width Size on Lifetime-Based FÃ¶rster Resonance Energy Transfer Parameter Estimation. Photonics, 2015, 2, 1027-1042.	0.9	15
77	FLIM-FRET for Cancer Applications. Current Molecular Imaging, 2015, 3, 144-161.	0.7	57
78	Mesh Optimization for Monte Carlo-Based Optical Tomography. Photonics, 2015, 2, 375-391.	0.9	6
79	Assessment of gate width size on lifetime-based Förster Resonance Energy Transfer parameter estimation. , 2015, , .		1
80	Multispectral time-resolved diffuse optical tomography system for absorber mapping in turbid medium using wide-field single-pixel camera. , 2015, , .		1
81	3D Bioprinting and 3D Imaging for Stem Cell Engineering. Pancreatic Islet Biology, 2015, , 33-66.	0.1	14
82	Hyperspectral time-resolved wide-field fluorescence molecular tomography based on structured light and single-pixel detection. Optics Letters, 2015, 40, 431.	1.7	63
83	SNR characterization of Mesoscopic Fluorescence Molecular Tomography with EMCCD camera. , 2015, , .		0
84	Molecular Fluorescence Tomography with Structured Light and Compressive Sensing. , 2015, , .		0
85	Biofabrication and 3D localization of multilayered cellular constructs using Laser Direct-Write and Mesoscopic Fluorescent Molecular Tomography. , 2015, , .		0
86	High-Resolution Mesoscopic Fluorescence Molecular Tomography Based on Compressive Sensing. IEEE Transactions on Biomedical Engineering, 2015, 62, 248-255.	2.5	31
87	Temporal Data Set Reduction Based on D-Optimality for Quantitative FLIM-FRET Imaging. PLoS ONE, 2015, 10, e0144421.	1.1	3
88	Multimodal Biomedical Optical Imaging Review: Towards Comprehensive Investigation of Biological Tissues. Current Molecular Imaging, 2015, 3, 72-87.	0.7	12
89	Wide-Field Lifetime-Based FÃ¶rster Resonance Energy Transfer in Live Animals. , 2015, , .		0
90	Imaging Tumor Targeted Delivery using FRET in vivo. FASEB Journal, 2015, 29, 577.1.	0.2	0

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91	Dental Imaging Using Mesoscopic Fluorescence Molecular Tomography: An ex Vivo Feasibility Study. Photonics, 2014, 1, 488-502.	0.9	7
92	Design consideration for descanned laminar optical tomography with EMCCD camera. , 2014, , .		0
93	Mesh optimization for Monte Carlo based optical tomography. , 2014, , .		0
94	Compressive Sensing based Reconstruction for Early Time-gate Fluorescence Molecular Tomography. , 2014, , .		0
95	High resolution 3D image reconstruction in laminar optical tomography based on compressive sensing. , 2014, , .		0
96	Spatial light modulator based active wide-field illumination for ex vivo and in vivo quantitative NIR FRET imaging. Biomedical Optics Express, 2014, 5, 944.	1.5	38
97	L_p regularization for early gate fluorescence molecular tomography. Optics Letters, 2014, 39, 4156.	1.7	78
98	Reduced temporal sampling effect on accuracy of time-domain fluorescence lifetime FÃ¶rster resonance energy transfer. Journal of Biomedical Optics, 2014, 19, 086023.	1.4	20
99	Mesoscopic Fluorescence Tomography of a Photosensitizer (HPPH) 3D Biodistribution in Skin Cancer. Academic Radiology, 2014, 21, 271-280.	1.3	42
100	Mesh optimization for fluorescence molecular tomography. , 2014, , .		0
101	Comparison of NIR FRET pairs for quantitative transferrin-based assay. Proceedings of SPIE, 2014, , .	0.8	1
102	Comparison of lp-regularization-based reconstruction methods for time domain fluorescence molecular tomography on early time gates. , 2014, , .		1
103	Structured light based hyperspectral time-resolved diffuse optical tomography system. , 2014, , .		0
104	Dental imaging using laminar optical tomography and micro CT. Proceedings of SPIE, 2014, , .	0.8	2
105	Hyperstral Optical Tomography based on double light modulator configuration. , 2014, , .		0
106	High Resolution Fluorescence Laminar Optical Tomography Based on lp-Norm Regularization. , 2014, , .		2
107	Solution field metrics in mesh optimization for Monte Carlo based optical tomography. , 2014, , .		0
108	Photodynamic Therapy Agent Bio-distribution in 3D with Mesoscopic Fluorescence Molecular Tomography. , 2014, , .		0

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109	Mesoscopic fluorescence molecular tomography of reporter genes in bioprinted thick tissue. Journal of Biomedical Optics, 2013, 18, 100501.	1.4	52
110	Laminar Optical Tomography Applied to Reporter Genes Imaging in Engineered Tissue Constructs. , 2013, , .		0
111	In Vivo Time-Resolved Fluorescence Imaging of a NIR FRET Probe in Live Mice. , 2013, , .		0
112	Selection of Temporal Gates for Bi-Exponential Fluorescence Lifetime Imaging. , 2013, , .		1
113	Multi-modal Imaging Cassette for Small Animal Molecular Imaging. , 2013, , .		0
114	Time-Resolved Multispectral Diffuse Optical Tomography System Based on Structured Illumination and Detection. , 2013, , .		1
115	Enhanced Dynamic Range and Accuracy of Fluorescence Lifetime Imaging by Active Illumination. , 2013, , .		0
116	Active wide-field illumination for high-throughput fluorescence lifetime imaging. Optics Letters, 2013, 38, 3976.	1.7	30
117	Adaptive wide-field optical tomography. Journal of Biomedical Optics, 2013, 18, 1.	1.4	106
118	Mesoscopic tomography imaging of reporter genes in thick printed tissue constructs. , 2013, , .		1
119	Non-Invasive In Vivo Imaging of Near Infrared-labeled Transferrin in Breast Cancer Cells and Tumors Using Fluorescence Lifetime FRET. PLoS ONE, 2013, 8, e80269.	1.1	93
120	Multimodal Diffuse Optical Imaging. Biological and Medical Physics Series, 2013, , 351-374.	0.3	0
121	Wide-field Time-Resolved Molecular Optical Tomography. , 2013, , .		0
122	Quantitative Detection of Near Infrared-labeled Transferrin using FRET Fluorescence Lifetime Wide-Field Imaging in Breast Cancer Cells In Vitro and In Vivo. , 2013, , .		1
123	High-Throughput Quantitative Fluorescence Lifetime Imaging based on Active Wide-Field Illumination. , 2013, , .		0
124	Ex VivoFluorescence Molecular Tomography of the Spine. International Journal of Biomedical Imaging, 2012, 2012, 1-11.	3.0	16
125	Mesh-based Monte Carlo method in time-domain widefield fluorescence molecular tomography. Journal of Biomedical Optics, 2012, 17, 1.	1.4	60
126	Quantitative tomographic imaging of intermolecular FRET in small animals. Biomedical Optics Express, 2012, 3, 3161.	1.5	76

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127	Recent Advances in Optical Mammography. Current Medical Imaging, 2012, 8, 244-259.	0.4	25
128	The integration of 3-D cell printing and mesoscopic fluorescence molecular tomography of vascular constructs within thick hydrogel scaffolds. Biomaterials, 2012, 33, 5325-5332.	5.7	147
129	Comparison of Monte Carlo methods for fluorescence molecular tomography-computational efficiency. Medical Physics, 2011, 38, 5788-5798.	1.6	90
130	Monte Carlo based method for fluorescence tomographic imaging with lifetime multiplexing using time gates. Biomedical Optics Express, 2011, 2, 871.	1.5	92
131	Anatomical segmentation for guided Fluorescence Molecular Tomography in small animals. , 2011, , .		0
132	Mesh-based Monte Carlo method for time-gated optical tomography. , 2011, , .		0
133	Time gated optical imaging for functional and structural imaging. , 2010, , .		0
134	Real-time diffuse optical tomography based on structured illumination. Journal of Biomedical Optics, 2010, 15, 016006.	1.4	93
135	Development of an optical imaging platform for functional imaging of small animals using wide-field excitation. Biomedical Optics Express, 2010, 1, 143.	1.5	86
136	Time-resolved diffuse optical tomography with patterned-light illumination and detection. Optics Letters, 2010, 35, 2121.	1.7	72
137	Full-field time-resolved fluorescence tomography of small animals. Optics Letters, 2010, 35, 3189.	1.7	102
138	Time-gated perturbation Monte Carloâ€¨for whole body functional imagingâ€¨in small animals. Optics Express, 2009, 17, 19566.	1.7	62
139	Adaptive mesh generation for diffuse optical tomography (Invited Paper). , 2007, , .		0
140	Multi-frequency diffuse optical tomography. Journal of Modern Optics, 2005, 52, 2139-2159.	0.6	30
141	Diffuse optical tomography with physiological and spatiala prioriconstraints. Physics in Medicine and Biology, 2004, 49, N155-N163.	1.6	99
142	Contrast-enhanced near-infrared (NIR) optical imaging for subsurface cancer detection. Journal of Porphyrins and Phthalocyanines, 2004, 08, 1106-1117.	0.4	37
143	In vivocontinuous-wave optical breast imaging enhanced with Indocyanine Green. Medical Physics, 2003, 30, 1039-1047.	1.6	230
144	Near-infrared phase cancellation instrument for fast and accurate localization of fluorescent heterogeneity. Review of Scientific Instruments, 2003, 74, 3466-3473.	0.6	27

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145	Noninvasive, low-noise, fast imaging of blood volume and deoxygenation changes in muscles using light-emitting diode continuous-wave imager. Review of Scientific Instruments, 2002, 73, 3065-3074.	0.6	60
146	Projection access order in algebraic reconstruction technique for diffuse optical tomography. Physics in Medicine and Biology, 2002, 47, N1-N10.	1.6	106
147	Detection limit enhancement of fluorescent heterogeneities in turbid media by dual-interfering excitation. Applied Optics, 2002, 41, 3999.	2.1	7
148	Recovery of optical parameters in diffusive media with gated-photon counting. , 0, , .		0