# Xavier Intes

List of Publications by Year
in descending order



| 148 papers | 3,589 citations | 126708 33 h-index | 155451 55 g-index |
|---|---|---|---|
| 160 all docs | 160 docs citations | 160 times ranked | 2397 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | In vivocontinuous-wave optical breast imaging enhanced with Indocyanine Green. Medical Physics, 2003, 30, 1039-1047. | 1.6 | 230 |
| 2 | 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 |
| 3 | Compressive hyperspectral time-resolved wide-field fluorescence lifetime imaging. Nature Photonics, 2017, 11, 411-414. | 15.6 | 111 |
| 4 | Projection access order in algebraic reconstruction technique for diffuse optical tomography. Physics in Medicine and Biology, 2002, 47, N1-N10. | 1.6 | 106 |
| 5 | Adaptive wide-field optical tomography. Journal of Biomedical Optics, 2013, 18, 1. | 1.4 | 106 |
| 6 | Full-field time-resolved fluorescence tomography of small animals. Optics Letters, 2010, 35, 3189. | 1.7 | 102 |
| 7 | Laser-based 3D bioprinting for spatial and size control of tumor spheroids and embryoid bodies. Acta Biomaterialia, 2019, 95, 357-370. | 4.1 | 102 |
| 8 | 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 |
| 9 | Diffuse optical tomography with physiological and spatiala prioriconstraints. Physics in Medicine and Biology, 2004, 49, N155-N163. | 1.6 | 99 |
| 10 | Real-time diffuse optical tomography based on structured illumination. Journal of Biomedical Optics, 2010, 15, 016006. | 1.4 | 93 |
| 11 | 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 |
| 12 | Monte Carlo based method for fluorescence tomographic imaging with lifetime multiplexing using time gates. Biomedical Optics Express, 2011, 2, 871. | 1.5 | 92 |
| 13 | Comparison of Monte Carlo methods for fluorescence molecular tomography-computational efficiency. Medical Physics, 2011, 38, 5788-5798. | 1.6 | 90 |
| 14 | 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 |
| 15 | L_p regularization for early gate fluorescence molecular tomography. Optics Letters, 2014, 39, 4156. | 1.7 | 78 |
| 16 | Quantitative tomographic imaging of intermolecular FRET in small animals. Biomedical Optics Express, 2012, 3, 3161. | 1.5 | 76 |
| 17 | Time-resolved diffuse optical tomography with patterned-light illumination and detection. Optics Letters, 2010, 35, 2121. | 1.7 | 72 |
| 18 | Review of structured light in diffuse optical imaging. Journal of Biomedical Optics, 2018, 24, 1. | 1.4 | 72 |

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| 19 | 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 |
| 20 | Hyperspectral time-resolved wide-field fluorescence molecular tomography based on structured light and single-pixel detection. Optics Letters, 2015, 40, 431. | 1.7 | 63 |
| 21 | Time-gated perturbation Monte Carloâ€¨for whole body functional imagingâ€¨in small animals. Optics Express, 2009, 17, 19566. | 1.7 | 62 |
| 22 | 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 |
| 23 | Mesh-based Monte Carlo method in time-domain widefield fluorescence molecular tomography. Journal of Biomedical Optics, 2012, 17, 1. | 1.4 | 60 |
| 24 | High-resolution tomographic analysis of in vitro 3D glioblastoma tumor model under long-term drug treatment. Science Advances, 2020, 6, eaay7513. | 4.7 | 60 |
| 25 | Assessing bimanual motor skills with optical neuroimaging. Science Advances, 2018, 4, eaat3807. | 4.7 | 59 |
| 26 | FLIM-FRET for Cancer Applications. Current Molecular Imaging, 2015, 3, 144-161. | 0.7 | 57 |
| 27 | Generalized mesh-based Monte Carlo for wide-field illumination and detection via mesh retessellation. Biomedical Optics Express, 2016, 7, 171. | 1.5 | 53 |
| 28 | Mesoscopic fluorescence molecular tomography of reporter genes in bioprinted thick tissue. Journal of Biomedical Optics, 2013, 18, 100501. | 1.4 | 52 |
| 29 | 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 |
| 30 | Mesoscopic Fluorescence Tomography of a Photosensitizer (HPPH) 3D Biodistribution in Skin Cancer. Academic Radiology, 2014, 21, 271-280. | 1.3 | 42 |
| 31 | Mesoscopic Fluorescence Molecular Tomography for Evaluating Engineered Tissues. Annals of Biomedical Engineering, 2016, 44, 667-679. | 1.3 | 42 |
| 32 | 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 |
| 33 | Contrast-enhanced near-infrared (NIR) optical imaging for subsurface cancer detection. Journal of Porphyrins and Phthalocyanines, 2004, 08, 1106-1117. | 0.4 | 37 |
| 34 | Quantitative imaging of receptor-ligand engagement in intact live animals. Journal of Controlled Release, 2018, 286, 451-459. | 4.8 | 36 |
| 35 | 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 |
| 36 | Deep Learning in Biomedical Optics. Lasers in Surgery and Medicine, 2021, 53, 748-775. | 1.1 | 32 |

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| 37 | High-Resolution Mesoscopic Fluorescence Molecular Tomography Based on Compressive Sensing. IEEE Transactions on Biomedical Engineering, 2015, 62, 248-255. | 2.5 | 31 |
| 38 | 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 |
| 39 | Multi-frequency diffuse optical tomography. Journal of Modern Optics, 2005, 52, 2139-2159. | 0.6 | 30 |
| 40 | Active wide-field illumination for high-throughput fluorescence lifetime imaging. Optics Letters, 2013, 38, 3976. | 1.7 | 30 |
| 41 | Luminescence lifetime imaging of three-dimensional biological objects. Journal of Cell Science, 2021, 134, 1-17. | 1.2 | 30 |
| 42 | Near-infrared phase cancellation instrument for fast and accurate localization of fluorescent heterogeneity. Review of Scientific Instruments, 2003, 74, 3466-3473. | 0.6 | 27 |
| 43 | Wide-field fluorescence molecular tomography with compressive sensing based preconditioning. Biomedical Optics Express, 2015, 6, 4887. | 1.5 | 26 |
| 44 | Assessing patterns for compressive fluorescence lifetime imaging. Optics Letters, 2018, 43, 4370. | 1.7 | 26 |
| 45 | UNMIX-ME: spectral and lifetime fluorescence unmixing via deep learning. Biomedical Optics Express, 2020, 11, 3857. | 1.5 | 26 |
| 46 | Recent Advances in Optical Mammography. Current Medical Imaging, 2012, 8, 244-259. | 0.4 | 25 |
| 47 | High compression deep learning based single-pixel hyperspectral macroscopic fluorescence lifetime imaging in vivo. Biomedical Optics Express, 2020, 11, 5401. | 1.5 | 23 |
| 48 | 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 |
| 49 | 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 |
| 50 | A machine learning approach to predict surgical learning curves. Surgery, 2020, 167, 321-327. | 1.0 | 18 |
| 51 | 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 |
| 52 | 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 |
| 53 | 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 |
| 54 | Macroscopic fluorescence lifetime topography enhanced via spatial frequency domain imaging. Optics Letters, 2020, 45, 4232. | 1.7 | 17 |

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| 55 | <i>Ex Vivo</i>Fluorescence Molecular Tomography of the Spine. International Journal of Biomedical Imaging, 2012, 2012, 1-11. | 3.0 | 16 |
| 56 | Comparison of illumination geometry for lifetimeâ€based measurements in wholeâ€body preclinical imaging. Journal of Biophotonics, 2018, 11, e201800037. | 1.1 | 16 |
| 57 | Quantification of Trastuzumabâ€"HER2 Engagement In Vitro and In Vivo. Molecules, 2020, 25, 5976. | 1.7 | 16 |
| 58 | Optical tomographic imaging for breast cancer detection. Journal of Biomedical Optics, 2017, 22, 1. | 1.4 | 16 |
| 59 | Deep learning in macroscopic diffuse optical imaging. Journal of Biomedical Optics, 2022, 27, . | 1.4 | 16 |
| 60 | Assessment of Gate Width Size on Lifetime-Based FÃ¶rster Resonance Energy Transfer Parameter Estimation. Photonics, 2015, 2, 1027-1042. | 0.9 | 15 |
| 61 | Radiative transfer equation modeling by streamline diffusion modified continuous Galerkin method. Journal of Biomedical Optics, 2016, 21, 036003. | 1.4 | 15 |
| 62 | Improving mesoscopic fluorescence molecular tomography via preconditioning and regularization. Biomedical Optics Express, 2018, 9, 2765. | 1.5 | 15 |
| 63 | Objective assessment of surgical skill transfer using non-invasive brain imaging. Surgical Endoscopy and Other Interventional Techniques, 2019, 33, 2485-2494. | 1.3 | 15 |
| 64 | 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 |
| 65 | Hyperspectral wide-field time domain single-pixel diffuse optical tomography platform. Biomedical Optics Express, 2018, 9, 6258. | 1.5 | 15 |
| 66 | In vitro and in vivo NIR fluorescence lifetime imaging with a time-gated SPAD camera. Optica, 2022, 9, 532. | 4.8 | 15 |
| 67 | 3D Bioprinting and 3D Imaging for Stem Cell Engineering. Pancreatic Islet Biology, 2015, , 33-66. | 0.1 | 14 |
| 68 | 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 |
| 69 | Functional brain connectivity related to surgical skill dexterity in physical and virtual simulation environments. Neurophotonics, 2021, 8, 015008. | 1.7 | 12 |
| 70 | Multimodal Biomedical Optical Imaging Review: Towards Comprehensive Investigation of Biological Tissues. Current Molecular Imaging, 2015, 3, 72-87. | 0.7 | 12 |
| 71 | Improving mesoscopic fluorescence molecular tomography through data reduction. Biomedical Optics Express, 2017, 8, 3868. | 1.5 | 11 |
| 72 | Deep learning-based motion artifact removal in functional near-infrared spectroscopy. Neurophotonics, 2022, 9, 041406. | 1.7 | 10 |

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| 73 | 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 |
| 74 | 3D k-space reflectance fluorescence tomography via deep learning. Optics Letters, 2022, 47, 1533. | 1.7 | 8 |
| 75 | Detection limit enhancement of fluorescent heterogeneities in turbid media by dual-interfering excitation. Applied Optics, 2002, 41, 3999. | 2.1 | 7 |
| 76 | Dental Imaging Using Mesoscopic Fluorescence Molecular Tomography: An ex Vivo Feasibility Study. Photonics, 2014, 1, 488-502. | 0.9 | 7 |
| 77 | 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 |
| 78 | System configuration optimization for mesoscopic fluorescence molecular tomography. Biomedical Optics Express, 2019, 10, 5660. | 1.5 | 7 |
| 79 | Accelerating Monte Carlo modeling of structured-light-based diffuse optical imaging via â€œphoton sharingâ€. Optics Letters, 2020, 45, 2842. | 1.7 | 7 |
| 80 | Macroscopic Fluorescence Lifetime Imaging for Monitoring of Drugâ€"Target Engagement. Methods in Molecular Biology, 2022, 2394, 837-856. | 0.4 | 7 |
| 81 | Mesh Optimization for Monte Carlo-Based Optical Tomography. Photonics, 2015, 2, 375-391. | 0.9 | 6 |
| 82 | Fluorescence lifetime FRET imaging of receptor-ligand complexes in tumor cells in vitro and in vivo. Proceedings of SPIE, 2017, , . | 0.8 | 5 |
| 83 | AlliGator: A Phasor Computational Platform for Fast in vivo Lifetime Analysis. , 2017, 2017, . | | 5 |
| 84 | Neuroimaging guided tES to facilitate complex laparoscopic surgical tasks â€" insights from functional near-infrared spectroscopy. , 2021, 2021, 7437-7440. | | 5 |
| 85 | Dental optical tomography with upconversion nanoparticlesâ€"a feasibility study. Journal of Biomedical Optics, 2017, 22, 066001. | 1.4 | 4 |
| 86 | Deep compressive macroscopic fluorescence lifetime imaging. , 2018, , . | | 4 |
| 87 | A Rapid Approach to Build Jacobians for Optical Tomography via Monte Carlo Method and Photon â€œReplayâ€. , 2017, , . | | 4 |
| 88 | Radiative transfer with delta-Eddington-type phase functions. Applied Mathematics and Computation, 2017, 300, 70-78. | 1.4 | 3 |
| 89 | Temporal Data Set Reduction Based on D-Optimality for Quantitative FLIM-FRET Imaging. PLoS ONE, 2015, 10, e0144421. | 1.1 | 3 |
| 90 | Dental imaging using laminar optical tomography and micro CT. Proceedings of SPIE, 2014, , . | 0.8 | 2 |

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| 91 | 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 |
| 92 | Monitoring receptor heterodimerization along intracellular trafficking pathways using anti-HER2 therapeutic antibodies. , 2021, , . | | 2 |
| 93 | High Resolution Fluorescence Laminar Optical Tomography Based on lp-Norm Regularization. , 2014, , . | | 2 |
| 94 | A deep learning approach to remove motion artifacts in fNIRS data analysis. , 2020, , . | | 2 |
| 95 | Brain network effects related to physical and virtual surgical training revealed by Granger causality. , 2021, 2021, 1014-1017. | | 2 |
| 96 | Efference information flow during skill acquisition mediates its interaction with medical simulation technology. , 2022, , . | | 2 |
| 97 | Selection of Temporal Gates for Bi-Exponential Fluorescence Lifetime Imaging. , 2013, , . | | 1 |
| 98 | Time-Resolved Multispectral Diffuse Optical Tomography System Based on Structured Illumination and Detection. , 2013, , . | | 1 |
| 99 | Mesoscopic tomography imaging of reporter genes in thick printed tissue constructs. , 2013, , . | | 1 |
| 100 | Comparison of NIR FRET pairs for quantitative transferrin-based assay. Proceedings of SPIE, 2014, , . | 0.8 | 1 |
| 101 | Comparison of lp-regularization-based reconstruction methods for time domain fluorescence molecular tomography on early time gates. , 2014, , . | | 1 |
| 102 | Assessment of gate width size on lifetime-based Förster Resonance Energy Transfer parameter estimation. , 2015, , . | | 1 |
| 103 | Multispectral time-resolved diffuse optical tomography system for absorber mapping in turbid medium using wide-field single-pixel camera. , 2015, , . | | 1 |
| 104 | Macroscopic fluorescence lifetime-based FÃ¶rster resonance energy transfer imaging for quantitative ligandâ€"receptor binding. , 2020, , 331-363. | | 1 |
| 105 | Compressive hyperspectral time-resolved wide-field fluorescence lifetime imaging. , 2017, , . | | 1 |
| 106 | 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 |
| 107 | Role of Tumor Heterogeneity in Imaging Breast Cancer Targeted Delivery using FLIM FRET in Vivo. , 2016, , . | | 1 |
| 108 | Longitudinal Volumetric Assessment of Glioblastoma Brain Tumors in 3D Bio-Printed Environment by Mesoscopic Fluorescence Molecular Tomography. , 2016, , . | | 1 |

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| 109 | fNIRS as a Quantitative tool to Asses and Predict Surgical Skills. , 2019, , . | | 1 |
| 110 | Fluorescent Lifetime Imaging improved via Deep Learning. , 2019, , . | | 1 |
| 111 | Dynamic macroscopic in vivo FRET for the quantitative monitoring of targeted receptor engagement. , 2019, , . | | 1 |
| 112 | Wide-field Diffuse Optical Tomography Using Deep Learning. , 2022, , . | | 1 |
| 113 | Recovery of optical parameters in diffusive media with gated-photon counting. , 0, , . | | 0 |
| 114 | Adaptive mesh generation for diffuse optical tomography (Invited Paper). , 2007, , . | | 0 |
| 115 | Time gated optical imaging for functional and structural imaging. , 2010, , . | | 0 |
| 116 | Anatomical segmentation for guided Fluorescence Molecular Tomography in small animals. , 2011, , . | | 0 |
| 117 | Mesh-based Monte Carlo method for time-gated optical tomography. , 2011, , . | | 0 |
| 118 | Laminar Optical Tomography Applied to Reporter Genes Imaging in Engineered Tissue Constructs. , 2013, , . | | 0 |
| 119 | In Vivo Time-Resolved Fluorescence Imaging of a NIR FRET Probe in Live Mice. , 2013, , . | | 0 |
| 120 | Multi-modal Imaging Cassette for Small Animal Molecular Imaging. , 2013, , . | | 0 |
| 121 | Enhanced Dynamic Range and Accuracy of Fluorescence Lifetime Imaging by Active Illumination. , 2013, , . | | 0 |
| 122 | Design consideration for descanned laminar optical tomography with EMCCD camera. , 2014, , . | | 0 |
| 123 | Mesh optimization for Monte Carlo based optical tomography. , 2014, , . | | 0 |
| 124 | Compressive Sensing based Reconstruction for Early Time-gate Fluorescence Molecular Tomography. , 2014, , . | | 0 |
| 125 | High resolution 3D image reconstruction in laminar optical tomography based on compressive sensing. , 2014, , . | | 0 |
| 126 | Mesh optimization for fluorescence molecular tomography. , 2014, , . | | 0 |

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| 127 | Structured light based hyperspectral time-resolved diffuse optical tomography system. , 2014, , . | | 0 |
| 128 | Hyperstral Optical Tomography based on double light modulator configuration. , 2014, , . | | 0 |
| 129 | SNR characterization of Mesoscopic Fluorescence Molecular Tomography with EMCCD camera. , 2015, , . | | 0 |
| 130 | Molecular Fluorescence Tomography with Structured Light and Compressive Sensing. , 2015, , . | | 0 |
| 131 | Biofabrication and 3D localization of multilayered cellular constructs using Laser Direct-Write and Mesoscopic Fluorescent Molecular Tomography. , 2015, , . | | 0 |
| 132 | Sparse temporal sampling for fast time-domain wide-field fluorescence molecular tomography. Proceedings of SPIE, 2016, , . | 0.8 | 0 |
| 133 | Monitoring Receptor Heterodimerization along Intracellular Trafficking Pathways using Antiâ€HER2 Therapeutic Antibodies. FASEB Journal, 2021, 35, . | 0.2 | 0 |
| 134 | Multimodal Diffuse Optical Imaging. Biological and Medical Physics Series, 2013, , 351-374. | 0.3 | 0 |
| 135 | Wide-field Time-Resolved Molecular Optical Tomography. , 2013, , . | | 0 |
| 136 | High-Throughput Quantitative Fluorescence Lifetime Imaging based on Active Wide-Field Illumination. , 2013, , . | | 0 |
| 137 | Solution field metrics in mesh optimization for Monte Carlo based optical tomography. , 2014, , . | | 0 |
| 138 | Photodynamic Therapy Agent Bio-distribution in 3D with Mesoscopic Fluorescence Molecular Tomography. , 2014, , . | | 0 |
| 139 | Wide-Field Lifetime-Based FÃ¶rster Resonance Energy Transfer in Live Animals. , 2015, , . | | 0 |
| 140 | Imaging Tumor Targeted Delivery using FRET in vivo. FASEB Journal, 2015, 29, 577.1. | 0.2 | 0 |
| 141 | Enabling wide-field illumination and detection in mesh-based Monte Carlo simulations. , 2016, , . | | 0 |
| 142 | Quantitative Deep Tissue Imaging of Target Engagement in Intact Live Animals. FASEB Journal, 2018, 32, 818.1. | 0.2 | 0 |
| 143 | Monitoring the effect of transcranial Electric current Stimulation (tES) during a bimanual motor task via functional Near-InfraRed Spectroscopy (fNIRS). , 2020, , . | | 0 |
| 144 | Hyperspectral Lifetime Unmixing via Deep Learning. , 2020, , . | | 0 |

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| 145 | 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 |
| 146 | System Characterization of Time-domain Mesoscopic Fluorescence Molecular Tomography. , 2022, , . | | 0 |
| 147 | Monte-Carlo based data generator for Deep Learning applications. , 2022, , . | | 0 |
| 148 | Characterization of a large Gated SPAD camera for in vivo Macroscopic Fluorescence Lifetime Imaging. , 2022, , . | | 0 |