Resource Summary Report

Nirfast

RRID:SCR_002503
Type: Tool

Proper Citation

Nirfast (RRID:SCR_002503)

Resource Information

URL: http://www.dartmouth.edu/~nir/nirfast/

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Description: A software package for modeling Near-Infrared light transport in tissue and image reconstruction. This includes: Standard single wavelength absorption and reduced scatter, Multi-wavelength spectrally constrained models and Fluorescence models.

Abbreviations: NIRFAST

Resource Type: simulation software, software application, data processing software, image analysis software, image reconstruction software, software resource

Defining Citation: PMID:20182646, PMID:23942632

Keywords: optical imaging, tissue

Funding:

Availability: BSD License

Resource Name: Nirfast

Resource ID: SCR_002503

Alternate IDs: nlx_155902

Alternate URLs: http://www.nitrc.org/projects/nirfast

Record Creation Time: 20220129T080213+0000

Ratings and Alerts

No rating or validation information has been found for Nirfast.

No alerts have been found for Nirfast.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 32 mentions in open access literature.

Listed below are recent publications. The full list is available at FDI Lab - SciCrunch.org.

Thomas A, et al. (2025) Quantitative photoacoustic imaging using known chromophores as fluence marker. Photoacoustics, 41, 100673.

Markow ZE, et al. (2025) Ultra high density imaging arrays in diffuse optical tomography for human brain mapping improve image quality and decoding performance. Scientific reports, 15(1), 3175.

Khan AF, et al. (2024) Distinct Time-Resolved Brain-Wide Coactivations in Oxygenated and Deoxygenated Hemoglobin. IEEE transactions on bio-medical engineering, 71(8), 2463.

Zhang F, et al. (2023) Network organization of resting-state cerebral hemodynamics and their aliasing contributions measured by functional near-infrared spectroscopy. Journal of neural engineering, 20(1).

Khan AF, et al. (2022) Transient brain-wide coactivations and structured transitions revealed in hemodynamic imaging data. NeuroImage, 260, 119460.

Madasamy A, et al. (2022) Deep learning methods hold promise for light fluence compensation in three-dimensional optoacoustic imaging. Journal of biomedical optics, 27(10).

Agrawal S, et al. (2021) Modeling combined ultrasound and photoacoustic imaging: Simulations aiding device development and artificial intelligence. Photoacoustics, 24, 100304.

Wood CA, et al. (2021) Clinically translatable quantitative molecular photoacoustic imaging with liposome-encapsulated ICG J-aggregates. Nature communications, 12(1), 5410.

Sudakou A, et al. (2021) Time-domain NIRS system based on supercontinuum light source and multi-wavelength detection: validation for tissue oxygenation studies. Biomedical optics express, 12(10), 6629.

Fan W, et al. (2021) Investigation of effect of modulation frequency on high-density diffuse optical tomography image quality. Neurophotonics, 8(4), 045002.

Cao J, et al. (2021) Enhanced spatiotemporal resolution imaging of neuronal activity using joint electroencephalography and diffuse optical tomography. Neurophotonics, 8(1), 015002.

Xu X, et al. (2021) Quantitative Bioluminescence Tomography-Guided Conformal Irradiation for Preclinical Radiation Research. International journal of radiation oncology, biology, physics, 111(5), 1310.

Meng B, et al. (2020) Noninvasive quantification of target availability during therapy using paired-agent fluorescence tomography. Theranostics, 10(24), 11230.

Forcione M, et al. (2020) Tomographic Task-Related Functional Near-Infrared Spectroscopy in Acute Sport-Related Concussion: An Observational Case Study. International journal of molecular sciences, 21(17).

Chae EY, et al. (2020) Development of digital breast tomosynthesis and diffuse optical tomography fusion imaging for breast cancer detection. Scientific reports, 10(1), 13127.

Ebrahimpour A, et al. (2020) Sensitivity Laplacian Ratio-Based Optimization of the Projection Selection for Diffuse Optical Tomography. Journal of medical signals and sensors, 10(2), 119.

Abdalmalak A, et al. (2020) Using fMRI to investigate the potential cause of inverse oxygenation reported in fNIRS studies of motor imagery. Neuroscience letters, 714, 134607.

Pacheco Tobo AL, et al. (2020) Anthropomorphic optical phantom of the neonatal thorax: a key tool for pulmonary studies in preterm infants. Journal of biomedical optics, 25(11).

Bentley A, et al. (2019) Single pixel hyperspectral bioluminescence tomography based on compressive sensing. Biomedical optics express, 10(11), 5549.

Ebrahimpour A, et al. (2019) Sensitivity Uniformity Ratio as a New Index to Optimize the Scanning Geometry for Fluorescent Molecular Tomography. Journal of medical signals and sensors, 9(1), 42.