Phaneendra Kumar Yalavarthy

List of Publications by Year
in descending order

78 papers	2,391 citations	236612 25 h-index	214527 47 g-index
78 all docs	78 docs citations	78 times ranked	1948 citing authors

#	Article	IF	Citations
1	Near infrared optical tomography using NIRFAST: Algorithm for numerical model and image reconstruction. Communications in Numerical Methods in Engineering, 2009, 25, 711-732.	1.3	552
2	Structural information within regularization matrices improves near infrared diffuse optical tomography. Optics Express, 2007, 15, 8043.	1.7	220
3	Weightâ€matrix structured regularization provides optimal generalized leastâ€squares estimate in diffuse optical tomography. Medical Physics, 2007, 34, 2085-2098.	1.6	142
4	Anam-Net: Anamorphic Depth Embedding-Based Lightweight CNN for Segmentation of Anomalies in COVID-19 Chest CT Images. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 932-946.	7.2	95
5	Basis pursuit deconvolution for improving model-based reconstructed images in photoacoustic tomography. Biomedical Optics Express, 2014, 5, 1363.	1.5	69
6	Deep Neural Network-Based Sinogram Super-Resolution and Bandwidth Enhancement for Limited-Data Photoacoustic Tomography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 2660-2673.	1.7	60
7	Deep neural network-based bandwidth enhancement of photoacoustic data. Journal of Biomedical Optics, 2017, 22, 1.	1.4	56
8	Least squares QR-based decomposition provides an efficient way of computing optimal regularization parameter in photoacoustic tomography. Journal of Biomedical Optics, 2013, 18, 080501.	1.4	53
9	Critical computational aspects of near infrared circular tomographic imaging: Analysis of measurement number, mesh resolution and reconstruction basis. Optics Express, 2006, 14, 6113.	1.7	51
10	Sparse Recovery Methods Hold Promise for Diffuse Optical Tomographic Image Reconstruction. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 74-82.	1.9	51
11	Mini-COVIDNet: Efficient Lightweight Deep Neural Network for Ultrasound Based Point-of-Care Detection of COVID-19. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 2023-2037.	1.7	50
12	Convolutional Neural Network-Based Robust Denoising of Low-Dose Computed Tomography Perfusion Maps. IEEE Transactions on Radiation and Plasma Medical Sciences, 2019, 3, 137-152.	2.7	42
13	A boundary element approach for imageâ€guided nearâ€infrared absorption and scatter estimation. Medical Physics, 2007, 34, 4545-4557.	1.6	41
14	SiameseGAN: A Generative Model for Denoising of Spectral Domain Optical Coherence Tomography Images. IEEE Transactions on Medical Imaging, 2021, 40, 180-192.	5.4	39
15	Localization and Activity Classification of Unmanned Aerial Vehicle Using mmWave FMCW Radars. IEEE Sensors Journal, 2021, 21, 16043-16053.	2.4	39
16	Generalized Beerâ€“Lambert model for near-infrared light propagation in thick biological tissues. Journal of Biomedical Optics, 2016, 21, 076012.	1.4	37
17	Reconstruction of optical properties of low-scattering tissue using derivative estimated through perturbation Monte-Carlo method. Journal of Biomedical Optics, 2004, 9, 1002.	1.4	36
18	Toward realâ€time availability of 3D temperature maps created with temporally constrained reconstruction. Magnetic Resonance in Medicine, 2014, 71, 1394-1404.	1.9	35

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19	Population differences in brain morphology: Need for population specific brain template. Psychiatry Research - Neuroimaging, 2017, 265, 1-8.	0.9	34
20	Deep Learning-Based Sign Language Digits Recognition From Thermal Images With Edge Computing System. IEEE Sensors Journal, 2021, 21, 10445-10453.	2.4	33
21	Design and Implementation of Deep Learning Based Contactless Authentication System Using Hand Gestures. Electronics (Switzerland), 2021, 10, 182.	1.8	32
22	Model-Resolution-Based Basis Pursuit Deconvolution Improves Diffuse Optical Tomographic Imaging. IEEE Transactions on Medical Imaging, 2014, 33, 891-901.	5.4	30
23	Target Classification by mmWave FMCW Radars Using Machine Learning on Range-Angle Images. IEEE Sensors Journal, 2021, 21, 19993-20001.	2.4	30
24	Robust Hand Gestures Recognition Using a Deep CNN and Thermal Images. IEEE Sensors Journal, 2021, 21, 26602-26614.	2.4	28
25	Minimal residual method provides optimal regularization parameter for diffuse optical tomography. Journal of Biomedical Optics, 2012, 17, 106015.	1.4	26
26	Helmholtz-Type Regularization Method for Permittivity Reconstruction Using Experimental Phantom Data of Electrical Capacitance Tomography. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 78-83.	2.4	25
27	Accelerating frequency-domain diffuse optical tomographic image reconstruction using graphics processing units. Journal of Biomedical Optics, 2010, 15, 066009.	1.4	25
28	A LSQRâ€type method provides a computationally efficient automated optimal choice of regularization parameter in diffuse optical tomography. Medical Physics, 2013, 40, 033101.	1.6	25
29	An efficient Jacobian reduction method for diffuse optical image reconstruction. Optics Express, 2007, 15, 15908.	1.7	24
30	Fractional Regularization to Improve Photoacoustic Tomographic Image Reconstruction. IEEE Transactions on Medical Imaging, 2019, 38, 1935-1947.	5.4	24
31	Image-guided filtering for improving photoacoustic tomographic image reconstruction. Journal of Biomedical Optics, 2018, 23, 1.	1.4	23
32	Effective contrast recovery in rapid dynamic near-infrared diffuse optical tomography using <inline-formula><math display="inline" overflow="scroll"><mrow><msub><mrow><mo mathvariant="bold-script">â„‘</mo></mrow><mrow><mn>1</mn></mrow></msub></mrow> linear image reconstruction method. Journal of Biomedical Optics, 2012, 17, 086009.	1.4	21
33	Implementation of a computationally efficient leastâ€squares algorithm for highly underâ€determined threeâ€dimensional diffuse optical tomography problems. Medical Physics, 2008, 35, 1682-1697.	1.6	18
34	Model-resolution based regularization improves near infrared diffuse optical tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 649.	0.8	18
35	PA-Fuse: deep supervised approach for the fusion of photoacoustic images with distinct reconstruction characteristics. Biomedical Optics Express, 2019, 10, 2227.	1.5	18
36	Singular value decomposition based computationally efficient algorithm for rapid dynamic nearâ€infrared diffuse optical tomography. Medical Physics, 2009, 36, 5559-5567.	1.6	16

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37	Experimental investigation of perturbation Monte-Carlo based derivative estimation for imaging low-scattering tissue. Optics Express, 2005, 13, 985.	1.7	15
38	Accelerated image reconstruction using extrapolated Tikhonov filtering for photoacoustic tomography. Medical Physics, 2018, 45, 3749-3767.	1.6	15
39	Binary photoacoustic tomography for improved vasculature imaging. Journal of Biomedical Optics, 2021, 26, .	1.4	15
40	Exponential filtering of singular values improves photoacoustic image reconstruction. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 1785.	0.8	14
41	Modeling Errors Compensation With Total Least Squares for Limited Data Photoacoustic Tomography. IEEE Journal of Selected Topics in Quantum Electronics, 2019, 25, 1-14.	1.9	14
42	Dataâ€resolution based optimization of the dataâ€collection strategy for near infrared diffuse optical tomography. Medical Physics, 2012, 39, 4715-4725.	1.6	13
43	Performance evaluation of typical approximation algorithms for nonconvex â„“p-minimization in diffuse optical tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 852.	0.8	13
44	Classification of Targets Using Statistical Features from Range FFT of mmWave FMCW Radars. Electronics (Switzerland), 2021, 10, 1965.	1.8	13
45	Siamese-SR: A Siamese Super-Resolution Model for Boosting Resolution of Digital Rock Images for Improved Petrophysical Property Estimation. IEEE Transactions on Image Processing, 2022, 31, 3479-3493.	6.0	12
46	Vector extrapolation methods for accelerating iterative reconstruction methods in limited-data photoacoustic tomography. Journal of Biomedical Optics, 2018, 23, 1.	1.4	11
47	Approximation of Internal Refractive Index Variation Improves Image Guided Diffuse Optical Tomography of Breast. IEEE Transactions on Biomedical Engineering, 2010, 57, 2560-2563.	2.5	10
48	Guided filter based image enhancement for focal error compensation in low cost automated histopathology microscopic system. Journal of Biophotonics, 2020, 13, e202000123.	1.1	10
49	Nonâ€local means improves totalâ€variation constrained photoacoustic image reconstruction. Journal of Biophotonics, 2021, 14, e202000191.	1.1	10
50	Mesh Simplification Based on Edge Collapsing Could Improve Computational Efficiency in Near Infrared Optical Tomographic Imaging. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1493-1501.	1.9	9
51	Analytical solutions for diffuse fluorescence spectroscopy/imaging in biological tissues Part I: zero and extrapolated boundary conditions. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 537.	0.8	9
52	Convergent Born series improves the accuracy of numerical solution of time-independent photoacoustic wave equation. Journal of Modern Optics, 2020, 67, 849-855.	0.6	9
53	Computationally efficient error estimate for evaluation of regularization in photoacoustic tomography. Journal of Biomedical Optics, 2016, 21, 106002.	1.4	9
54	Nonquadratic penalization improves near-infrared diffuse optical tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 1516.	0.8	8

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55	Assessment of ultrasound modulation of near infrared light on the quantification of scattering coefficient. Medical Physics, 2010, 37, 3744-3751.	1.6	7
56	Prior image-constrained â„“_1-norm-based reconstruction method for effective usage of structural information in diffuse optical tomography. Optics Letters, 2012, 37, 4353.	1.7	7
57	Dimensionality reduced plug and play priors for improving photoacoustic tomographic imaging with limited noisy data. Biomedical Optics Express, 2021, 12, 1320.	1.5	7
58	Comparing two regularization techniques for diffuse optical tomography. , 2007, , .		5
59	Data-resolution based optimal choice of minimum required measurements for image-guided diffuse optical tomography. Optics Letters, 2013, 38, 88.	1.7	5
60	Comparison of iterative parametric and indirect deep learningâ€based reconstruction methods in highly undersampled DCEâ€MR Imaging of the breast. Medical Physics, 2020, 47, 4838-4861.	1.6	5
61	Spatially variant regularization based on model resolution and fidelity embedding characteristics improves photoacoustic tomography. Journal of Biomedical Optics, 2018, 23, 1.	1.4	5
62	Modeling of Terahertz Heating Effects in Realistic Tissues. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 8400908-8400908.	1.9	3
63	Incoherence-based optimal selection of independent measurements in diffuse optical tomography. Journal of Biomedical Optics, 2014, 19, 036017.	1.4	3
64	Structural a priori information in near-infrared optical tomography. , 2007, , .		2
65	Analytical solutions for diffuse fluorescence spectroscopy/imaging in biological tissues Part II: comparison and validation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 553.	0.8	2
66	Efficient gradient-free simplex method for estimation of optical properties in image-guided diffuse optical tomography. Journal of Biomedical Optics, 2013, 18, 030503.	1.4	2
67	Born-ratio type data normalization improves quantitation in photoacoustic tomography. Proceedings of SPIE, 2014, , .	0.8	2
68	Prior image based temporally constrained reconstruction algorithm for magnetic resonance guided high intensity focused ultrasound. Medical Physics, 2015, 42, 6804-6814.	1.6	2
69	Direct Sensitivity Based Data-Optimization Strategy for Image-Guided Diffuse Optical Tomography. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 69-77.	1.9	2
70	Vector extrapolation methods for accelerating iterative reconstruction methods in limited-data photoacoustic tomography. Journal of Biomedical Optics, 2018, 23, 1.	1.4	2
71	Current role of PET in oncology: Potentials and challenges in the management of non-small cell lung cancer. , 2008, , .		1
72	Distinguishing cognitive states using iterative classification. , 2012, , .		1

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73	SpiNet: A deep neural network for Schatten pâ€norm regularized medical image reconstruction. Medical Physics, 2021, 48, 2214-2229.	1.6	1
74	Interstitial fluid pressure due to externally applied force in breast tissue. , 2007, 6431, 190.		0
75	Fast analytical spectral filtering methods for magnetic resonance perfusion quantification. , 2016, 2016, 1224-1227.		0
76	Rapid perfusion quantification using Welch-Satterthwaite approximation and analytical spectral filtering. , 2017, , .		0
77	Special Issue on Applied Computational Science and Engineering. Journal of the Indian Institute of Science, 2017, 97, 311-311.	0.9	0
78	An Efficient Jacobian Reduction Method For Image Reconstruction Using Diffuse Optical Tomography. , 2008, , .		0