Tanja Tarvainen

List of Publications by Year
in descending order

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92	1,992	257450 24	265206 42
papers	citations	h-index	g-index

95	95	95	1097
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Approximation errors and model reduction with an application in optical diffusion tomography. Inverse Problems, 2006, 22, 175-195.	2.0	187
2	A gradient-based method for quantitative photoacoustic tomography using the radiative transfer equation. Inverse Problems, 2013, 29, 075006.	2.0	108
3	Coupled radiative transfer equation and diffusion approximation model for photon migration in turbid medium with low-scattering and non-scattering regions. Physics in Medicine and Biology, 2005, 50, 4913-4930.	3.0	100
4	Simultaneous reconstruction of electrode contact impedances and internal electrical properties: I. Theory. Measurement Science and Technology, 2002, 13, 1848-1854.	2.6	91
5	Simultaneous reconstruction of electrode contact impedances and internal electrical properties: II. Laboratory experiments. Measurement Science and Technology, 2002, 13, 1855-1861.	2.6	84
6	Hybrid radiative-transferâ€“diffusion model for optical tomography. Applied Optics, 2005, 44, 876.	2.1	80
7	Reconstructing absorption and scattering distributions in quantitative photoacoustic tomography. Inverse Problems, 2012, 28, 084009.	2.0	74
8	Gaussâ€“Newton reconstruction method for optical tomography using the finite element solution of the radiative transfer equation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 2767-2778.	2.3	64
9	An approximation error approach for compensating for modelling errors between the radiative transfer equation and the diffusion approximation in diffuse optical tomography. Inverse Problems, 2010, 26, 015005.	2.0	63
10	MARGINALIZATION OF UNINTERESTING DISTRIBUTED PARAMETERS IN INVERSE PROBLEMSÂ—APPLICATION TO DIFFUSE OPTICAL TOMOGRAPHY. , 2011, 1, 1-17.		62
11	Finite element model for the coupled radiative transfer equation and diffusion approximation. International Journal for Numerical Methods in Engineering, 2006, 65, 383-405.	2.8	56
12	ValoMC: a Monte Carlo software and MATLAB toolbox for simulating light transport in biological tissue. OSA Continuum, 2019, 2, 957.	1.8	56
13	Instrumentation and calibration methods for the multichannel measurement of phase and amplitude in optical tomography. Review of Scientific Instruments, 2005, 76, 044302.	1.3	55
14	Bayesian Image Reconstruction in Quantitative Photoacoustic Tomography. IEEE Transactions on Medical Imaging, 2013, 32, 2287-2298.	8.9	48
15	Approximation errors and model reduction in three-dimensional diffuse optical tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 2257.	1.5	45
16	A Bayesian approach to spectral quantitative photoacoustic tomography. Inverse Problems, 2014, 30, 065012.	2.0	45
17	Variable order spherical harmonic expansion scheme for the radiative transport equation using finite elements. Journal of Computational Physics, 2011, 230, 7364-7383.	3.8	39
18	Image reconstruction with uncertainty quantification in photoacoustic tomography. Journal of the Acoustical Society of America, 2016, 139, 1951-1961.	1.1	38

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19	Direct Estimation of Optical Parameters From Photoacoustic Time Series in Quantitative Photoacoustic Tomography. IEEE Transactions on Medical Imaging, 2016, 35, 2497-2508.	8.9	35
20	Image reconstruction in diffuse optical tomography using the coupled radiative transportâ€“diffusion model. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2600-2608.	2.3	34
21	Corrections to linear methods for diffuse optical tomography using approximation error modelling. Biomedical Optics Express, 2010, 1, 209.	2.9	31
22	Reconstruction of subdomain boundaries of piecewise constant coefficients of the radiative transfer equation from optical tomography data. Inverse Problems, 2006, 22, 2175-2196.	2.0	26
23	Computational calibration method for optical tomography. Applied Optics, 2005, 44, 1879.	2.1	25
24	Simultaneous estimation of spatially distributed thermal conductivity, heat capacity and surface heat transfer coefficient in thermal tomography. International Journal of Heat and Mass Transfer, 2012, 55, 7958-7968.	4.8	25
25	3D thermal tomography with experimental measurement data. International Journal of Heat and Mass Transfer, 2014, 78, 1126-1134.	4.8	24
26	On Learned Operator Correction in Inverse Problems. SIAM Journal on Imaging Sciences, 2021, 14, 92-127.	2.2	24
27	Finite element approximation of the radiative transport equation in a medium with piece-wise constant refractive index. Journal of Computational Physics, 2015, 282, 345-359.	3.8	22
28	Segmentation of vessel structures from photoacoustic images with reliability assessment. Biomedical Optics Express, 2018, 9, 2887.	2.9	22
29	Quantitative photoacoustic tomography using illuminations from a single direction. Journal of Biomedical Optics, 2015, 20, 036015.	2.6	21
30	Compensation of optode sensitivity and position errors in diffuse optical tomography using the approximation error approach. Biomedical Optics Express, 2013, 4, 2015.	2.9	18
31	Bayesian approximation error approach in full-wave ultrasound tomography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 1627-1637.	3.0	18
32	Modelling of errors due to speed of sound variations in photoacoustic tomography using a Bayesian framework. Biomedical Physics and Engineering Express, 2020, 6, 015003.	1.2	18
33	Hybrid forward-peaked-scattering-diffusion approximations for light propagation in turbid media with low-scattering regions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 116, 132-144.	2.3	17
34	A Model-Based Iterative Learning Approach for Diffuse Optical Tomography. IEEE Transactions on Medical Imaging, 2022, 41, 1289-1299.	8.9	17
35	Compensation of modeling errors due to unknown domain boundary in diffuse optical tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 1847.	1.5	16
36	Three dimensional photoacoustic tomography in Bayesian framework. Journal of the Acoustical Society of America, 2018, 144, 2061-2071.	1.1	16

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37	Approximate marginalization of unknown scattering in quantitative photoacoustic tomography. Inverse Problems and Imaging, 2014, 8, 811-829.	1.1	16
38	Approximation error method can reduce artifacts due to scalp blood flow in optical brain activation imaging. Journal of Biomedical Optics, 2012, 17, 0960121.	2.6	15
39	Perturbation Monte Carlo Method for Quantitative Photoacoustic Tomography. IEEE Transactions on Medical Imaging, 2020, 39, 2985-2995.	8.9	15
40	Modeling of Errors Due to Uncertainties in Ultrasound Sensor Locations in Photoacoustic Tomography. IEEE Transactions on Medical Imaging, 2020, 39, 2140-2150.	8.9	14
41	Truncated Fourier-series approximation of the time-domain radiative transfer equation using finite elements. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 470.	1.5	13
42	Acoustic pressure field estimation methods for synthetic schlieren tomography. Journal of the Acoustical Society of America, 2019, 145, 2470-2479.	1.1	13
43	Detection of faults in resistive coatings with an impedance-tomography-related approach. Measurement Science and Technology, 2002, 13, 865-872.	2.6	11
44	Finite element approximation of the Fokkerâ€“Planck equation for diffuse optical tomography. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 1406-1417.	2.3	11
45	Thermal tomography utilizing truncated Fourier series approximation of the heat diffusion equation. International Journal of Heat and Mass Transfer, 2017, 108, 860-867.	4.8	11
46	Black Mesoporous Silicon as a Contrast Agent for LED-Based 3D Photoacoustic Tomography. ACS Applied Materials & Interfaces, 2020, 12, 5456-5461.	8.0	11
47	Time-domain diffuse optical tomography utilizing truncated Fourier series approximation. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, 182.	1.5	11
48	Modeling boundary measurements of scattered light using the corrected diffusion approximation. Biomedical Optics Express, 2012, 3, 552.	2.9	10
49	Efficient Inclusion of Total Variation Type Priors in Quantitative Photoacoustic Tomography. SIAM Journal on Imaging Sciences, 2016, 9, 1132-1153.	2.2	9
50	Quantitative photoacoustic tomography augmented with surface light measurements. Biomedical Optics Express, 2017, 8, 4380.	2.9	9
51	Image Reconstruction with Reliability Assessment in Quantitative Photoacoustic Tomography. Journal of Imaging, 2018, 4, 148.	3.0	9
52	Nonlinear approach to difference imaging in diffuse optical tomography. Journal of Biomedical Optics, 2015, 20, 105001.	2.6	8
53	Approximate marginalization of absorption and scattering in fluorescence diffuse optical tomography. Inverse Problems and Imaging, 2016, 10, 227-246.	1.1	8
54	Optical Imaging. , 2011, , 735-780.		6

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55	Evaluation of temporal moments and Fourier transformed data in time-domain diffuse optical tomography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2020, 37, 1845.	1.5	6
56	3D quantitative photoacoustic tomography using the Î´-Eddington approximation. Proceedings of SPIE, 2013, , .	0.8	5
57	Application of diffusion approximation in quantitative photoacoustic tomography in the presence of low-scattering regions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 250, 107065.	2.3	5
58	Utilizing the Radiative Transfer Equation in Optical Tomography. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2008, 4, 655-660.	0.4	5
59	Adaptive stochastic Gaussâ€“Newton method with optical Monte Carlo for quantitative photoacoustic tomography. Journal of Biomedical Optics, 2022, 27, .	2.6	5
60	Photoacoustic tomography setup using LED illumination. , 2019, , .		3
61	Image Reconstruction in Optical Tomography Using the Finite Element Solution of the Radiative Transfer Equation. , 2010, , .		2
62	Utilising the radiative transfer equation in quantitative photoacoustic tomography. , 2017, , .		2
63	The D-Bar Method for Diffuse Optical Tomography: A Computational Study. Experimental Mathematics, 2017, 26, 225-240.	0.7	2
64	Computationally Efficient Forward Operator for Photoacoustic Tomography Based on Coordinate Transformations. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 2172-2182.	3.0	2
65	Optical Imaging. , 2015, , 1033-1079.		2
66	Compensation of optode position and sensitivity errors in diffuse optical tomography. , 2014, , .		2
67	Approximation Errors and Model Reduction in Optical Tomography. , 2006, 2006, 2659-62.		1
68	Utilising the coupled radiative transfer - diffusion model in diffuse optical tomography. Proceedings of SPIE, 2013, , .	0.8	1
69	Utilizing Fokker-Planck-Eddington approximation in modeling light transport in tissues-like media. Proceedings of SPIE, 2013, , .	0.8	1
70	Image reconstruction with noise and error modelling in quantitative photoacoustic tomography. , 2016, , .		1
71	Bayesian parameter estimation in spectral quantitative photoacoustic tomography. , 2016, , .		1
72	Bayesian approach to image reconstruction in photoacoustic tomography. Proceedings of SPIE, 2017, , .	0.8	1

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73	11. Quantitative photoacoustic tomography in Bayesian framework. , 2019, , 239-272.		1
74	Approximation Error Approach for Compensating Modelling Errors in Optical Tomography. , 2010, , .		1
75	Finite element approximations for the radiative transfer equation. , 2006, , .		1
76	Modelling of uncertainties in ultrasound sensor locations in photoacoustic tomography. , 2020, , .		1
77	Nonlinear estimation of pressure projection of ultrasound fields in background-oriented schlieren imaging. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2022, 39, 552.	1.5	1
78	Utilising Approximation Error Modelling in Linear Reconstruction in Diffuse Optical Tomography. , 2012, , .		0
79	Approximating the time-domain radiative transfer equation using truncated Fourier series. Proceedings of SPIE, 2013, , .	0.8	0
80	Thermal Tomography Using Experimental Measurement Data. , 2013, , .		0
81	Image reconstruction in quantitative photoacoustic tomography using the radiative transfer equation and the diffusion approximation. , 2013, , .		0
82	Photoacoustic image reconstruction with uncertainty quantification. IFMBE Proceedings, 2018, , 113-116.	0.3	0
83	Modeling photon migration in tissues with the coupled radiative transfer equation and diffusion approximation. , 2006, , .		0
84	Approximation Errors and Model Reduction in Three-Dimensional Diffuse Optical Tomography. , 2012, , .		0
85	Image Reconstruction and Uncertainty Quantification in Photoacoustic Tomography. , 2017, , .		0
86	Estimation and uncertainty quantification of optical properties directly from the photoacoustic time series. , 2017, , .		0
87	Photoacoustic image reconstruction in Bayesian framework. , 2018, , .		0
88	Modelling of Errors and Uncertainties in Photoacoustic Tomography using a Bayesian Framework. , 2019, , .		0
89	Compensating modeling errors of diffusion approximation in quantitative photoacoustic tomography using a Bayesian approach. , 2021, , .		0
90	Fourier transform provides computational advantages for time-domain diffuse optical tomography. , 2021, , .		0

#	Article	IF	Citations
91	Perturbation Monte Carlo in quantitative photoacoustic tomography. , 2021, , .		0
92	Computationally efficient forward model for photoacoustic tomography. , 2021, , .		0