Aki Pulkkinen

List of Publications by Year
in descending order

49	783	567281 15	501196 28
papers	citations	h-index	g-index

49	49	49	633
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	Adaptive stochastic Gaussâ€“Newton method with optical Monte Carlo for quantitative photoacoustic tomography. Journal of Biomedical Optics, 2022, 27, .	2.6	5
3	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
4	Compensating modeling errors of diffusion approximation in quantitative photoacoustic tomography using a Bayesian approach. , 2021, , .		0
5	Perturbation Monte Carlo in quantitative photoacoustic tomography. , 2021, , .		0
6	Computationally efficient forward model for photoacoustic tomography. , 2021, , .		0
7	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
8	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
9	Perturbation Monte Carlo Method for Quantitative Photoacoustic Tomography. IEEE Transactions on Medical Imaging, 2020, 39, 2985-2995.	8.9	15
10	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
11	Modelling of uncertainties in ultrasound sensor locations in photoacoustic tomography. , 2020, , .		1
12	First-Principles Study of the Impact of Grain Boundary Formation in the Cathode Material LiFePO4. Condensed Matter, 2019, 4, 80.	1.8	8
13	Acoustic pressure field estimation methods for synthetic schlieren tomography. Journal of the Acoustical Society of America, 2019, 145, 2470-2479.	1.1	13
14	ValoMC: a Monte Carlo software and MATLAB toolbox for simulating light transport in biological tissue. OSA Continuum, 2019, 2, 957.	1.8	56
15	Characterization of Ultrasound Fields Using a Potential Optical Flow Based Synthetic Schlieren Tomography. , 2019, , .		0
16	Modelling of Errors and Uncertainties in Photoacoustic Tomography using a Bayesian Framework. , 2019, , .		0
17	Photoacoustic tomography setup using LED illumination. , 2019, , .		3
18	Photoacoustic image reconstruction with uncertainty quantification. IFMBE Proceedings, 2018, , 113-116.	0.3	0

#	Article	IF	Citations
19	Image Reconstruction with Reliability Assessment in Quantitative Photoacoustic Tomography. Journal of Imaging, 2018, 4, 148.	3.0	9
20	Three dimensional photoacoustic tomography in Bayesian framework. Journal of the Acoustical Society of America, 2018, 144, 2061-2071.	1.1	16
21	Synthetic Schlieren Tomography of Focused Ultrasound Transducers. , 2018, , .		0
22	Photoacoustic image reconstruction in Bayesian framework. , 2018, , .		0
23	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
24	Bayesian approach to image reconstruction in photoacoustic tomography. Proceedings of SPIE, 2017, , .	0.8	1
25	Utilising the radiative transfer equation in quantitative photoacoustic tomography. , 2017, , .		2
26	Ultrasound field characterization using synthetic schlieren tomography. Journal of the Acoustical Society of America, 2017, 141, 4600-4609.	1.1	22
27	Quantitative photoacoustic tomography augmented with surface light measurements. Biomedical Optics Express, 2017, 8, 4380.	2.9	9
28	Image Reconstruction and Uncertainty Quantification in Photoacoustic Tomography. , 2017, , .		0
29	Estimation and uncertainty quantification of optical properties directly from the photoacoustic time series. , 2017, , .		0
30	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
31	A numerical study on the oblique focus in MR-guided transcranial focused ultrasound. Physics in Medicine and Biology, 2016, 61, 8025-8043.	3.0	19
32	Image reconstruction with uncertainty quantification in photoacoustic tomography. Journal of the Acoustical Society of America, 2016, 139, 1951-1961.	1.1	38
33	Image reconstruction with noise and error modelling in quantitative photoacoustic tomography. , 2016, , .		1
34	Bayesian parameter estimation in spectral quantitative photoacoustic tomography. , 2016, , .		1
35	Quantitative photoacoustic tomography using illuminations from a single direction. Journal of Biomedical Optics, 2015, 20, 036015.	2.6	21
36	Numerical simulations of clinical focused ultrasound functional neurosurgery. Physics in Medicine and Biology, 2014, 59, 1679-1700.	3.0	60

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37	A Bayesian approach to spectral quantitative photoacoustic tomography. Inverse Problems, 2014, 30, 065012.	2.0	45
38	Approximate marginalization of unknown scattering in quantitative photoacoustic tomography. Inverse Problems and Imaging, 2014, 8, 811-829.	1.1	16
39	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
40	Bayesian Image Reconstruction in Quantitative Photoacoustic Tomography. IEEE Transactions on Medical Imaging, 2013, 32, 2287-2298.	8.9	48
41	Approximating the time-domain radiative transfer equation using truncated Fourier series. Proceedings of SPIE, 2013, , .	0.8	0
42	Image reconstruction in quantitative photoacoustic tomography using the radiative transfer equation and the diffusion approximation. , 2013, , .		0
43	Investigation of Standing-Wave Formation in a Human Skull for a Clinical Prototype of a Large-Aperture, Transcranial MR-Guided Focused Ultrasound (MRgFUS) Phased Array: An Experimental and Simulation Study. IEEE Transactions on Biomedical Engineering, 2012, 59, 435-444.	4.2	56
44	The utility of sparse 2D fully electronically steerable focused ultrasound phased arrays for thermal surgery: a simulation study. Physics in Medicine and Biology, 2011, 56, 4913-4932.	3.0	31
45	Simulations and measurements of transcranial low-frequency ultrasound therapy: skull-base heating and effective area of treatment. Physics in Medicine and Biology, 2011, 56, 4661-4683.	3.0	63
46	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
47	Computational aspects in high intensity ultrasonic surgery planning. Computerized Medical Imaging and Graphics, 2010, 34, 69-78.	5.8	12
48	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
49	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