Amir Rosenthal

List of Publications by Year
in descending order

69 papers	2,543 citations	236925 25 h-index	197818 49 g-index
70 all docs	70 docs citations	70 times ranked	1708 citing authors

#	Article	IF	Citations
1	Fast Semi-Analytical Model-Based Acoustic Inversion for Quantitative Optoacoustic Tomography. IEEE Transactions on Medical Imaging, 2010, 29, 1275-1285.	8.9	255
2	High-sensitivity compact ultrasonic detector based on a pi-phase-shifted fiber Bragg grating. Optics Letters, 2011, 36, 1833.	3.3	230
3	Looking at sound: optoacoustics with all-optical ultrasound detection. Light: Science and Applications, 2018, 7, 53.	16.6	230
4	Acoustic Inversion in Optoacoustic Tomography: A Review. Current Medical Imaging, 2014, 9, 318-336.	0.8	176
5	Two-Dimensional Intravascular Near-Infrared Fluorescence Molecular Imaging of Inflammation in Atherosclerosis and Stent-Induced Vascular Injury. Journal of the American College of Cardiology, 2011, 57, 2516-2526.	2.8	152
6	Modelâ€based optoacoustic inversion with arbitraryâ€shape detectors. Medical Physics, 2011, 38, 4285-4295.	3.0	127
7	Modelâ€based optoacoustic inversions with incomplete projection data. Medical Physics, 2011, 38, 1694-1704.	3.0	104
8	Quantitative Optoacoustic Signal Extraction Using Sparse Signal Representation. IEEE Transactions on Medical Imaging, 2009, 28, 1997-2006.	8.9	77
9	Sensitive interferometric detection of ultrasound for minimally invasive clinical imaging applications. Laser and Photonics Reviews, 2014, 8, 450-457.	8.7	71
10	Modeling the shape of cylindrically focused transducers in three-dimensional optoacoustic tomography. Journal of Biomedical Optics, 2013, 18, 076014.	2.6	65
11	Performance of iterative optoacoustic tomography with experimental data. Applied Physics Letters, 2009, 95, .	3.3	61
12	Wideband optical sensing using pulse interferometry. Optics Express, 2012, 20, 19016.	3.4	50
13	Single pixel imaging at megahertz switching rates via cyclic Hadamard masks. Nature Communications, 2021, 12, 4516.	12.8	50
14	Optoacoustic methods for frequency calibration of ultrasonic sensors. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 316-326.	3.0	43
15	Efficient Framework for Model-Based Tomographic Image Reconstruction Using Wavelet Packets. IEEE Transactions on Medical Imaging, 2012, 31, 1346-1357.	8.9	43
16	Embedded ultrasound sensor in a silicon-on-insulator photonic platform. Applied Physics Letters, 2014, 104, 021116.	3.3	40
17	Fiber interferometer for hybrid optical and optoacoustic intravital microscopy. Optica, 2017, 4, 1180.	9.3	40
18	Model-based optoacoustic imaging using focused detector scanning. Optics Letters, 2012, 37, 4080.	3.3	39

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19	Multirate Synchronous Sampling of Sparse Multiband Signals. IEEE Transactions on Signal Processing, 2010, 58, 1144-1156.	5.3	38
20	All-optical optoacoustic microscope based on wideband pulse interferometry. Optics Letters, 2016, 41, 1953.	3.3	38
21	Analysis and design of nonlinear fiber Bragg gratings and their application for optical compression of reflected pulses. Optics Letters, 2006, 31, 1334.	3.3	31
22	Optoacoustic determination of spatio- temporal responses of ultrasound sensors. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1234-1244.	3.0	31
23	Sparsityâ€based acoustic inversion in crossâ€sectional multiscale optoacoustic imaging. Medical Physics, 2015, 42, 5444-5452.	3.0	28
24	Silicon-photonics acoustic detector for optoacoustic micro-tomography. Nature Communications, 2022, 13, 1488.	12.8	27
25	Spatial characterization of the response of a silica optical fiber to wideband ultrasound. Optics Letters, 2012, 37, 3174.	3.3	26
26	Magnetoacoustic Sensing of Magnetic Nanoparticles. Physical Review Letters, 2016, 116, 108103.	7.8	26
27	Quantitative intravascular biological fluorescence-ultrasound imaging of coronary and peripheral arteries in vivo. European Heart Journal Cardiovascular Imaging, 2017, 18, 1253-1261.	1.2	26
28	Near-infrared fluorescence catheter system for two-dimensional intravascular imaging in vivo. Optics Express, 2010, 18, 11372.	3.4	24
29	Noise reduction in resonator-based ultrasound sensors by using a CW laser and phase detection. Optics Letters, 2019, 44, 2677.	3.3	24
30	Characterization of the spatio-temporal response of optical fiber sensors to incident spherical waves. Journal of the Acoustical Society of America, 2014, 135, 1853-1862.	1.1	22
31	Reconstruction of a fiber Bragg grating from noisy reflection data. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 84.	1.5	21
32	Intravascular multispectral optoacoustic tomography of atherosclerosis: prospects and challenges. Imaging in Medicine, 2012, 4, 299-310.	0.0	19
33	Multiscale Multispectral Optoacoustic Tomography by a Stationary Wavelet Transform Prior to Unmixing. IEEE Transactions on Medical Imaging, 2014, 33, 1194-1202.	8.9	19
34	Multirate asynchronous sampling of sparse multiband signals. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 2320.	1.5	18
35	Wideband Fiber-Interferometer Stabilization With Variable Phase. IEEE Photonics Technology Letters, 2012, 24, 1499-1501.	2.5	18
36	Passive-demodulation pulse interferometry for ultrasound detection with a high dynamic range. Optics Letters, 2018, 43, 1039.	3.3	18

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37	Interpolated model-matrix optoacoustic tomography of the mouse brain. Applied Physics Letters, 2011, 98, 163701.	3.3	17
38	Spatiospectral denoising framework for multispectral optoacoustic imaging based on sparse signal representation. Medical Physics, 2014, 41, 113301.	3.0	15
39	Simultaneous multi-channel ultrasound detection via phase modulated pulse interferometry. Optics Express, 2019, 27, 28844.	3.4	15
40	Optical Under-Sampling and Reconstruction of Several Bandwidth-Limited Signals. Journal of Lightwave Technology, 2009, 27, 1027-1033.	4.6	14
41	Multispectral optoacoustic tomography by means of normalized spectral ratio. Optics Letters, 2011, 36, 4176.	3.3	12
42	High-Throughput Sparsity-Based Inversion Scheme for Optoacoustic Tomography. IEEE Transactions on Medical Imaging, 2016, 35, 674-684.	8.9	12
43	Modeling the sensitivity dependence of silicon-photonics-based ultrasound detectors. Optics Letters, 2017, 42, 5262.	3.3	12
44	Optoacoustic image reconstruction and system analysis for finite-aperture detectors under the wavelet-packet framework. Journal of Biomedical Optics, 2016, 21, 016002.	2.6	11
45	GrÃ¼neisen-relaxation photoacoustic microscopy at 1.7â€‰â€‰Âµm and its application in lipid imaging. Optics Letters, 2020, 45, 3268.	3.3	11
46	Analysis of Negatively Focused Ultrasound Detectors in Optoacoustic Tomography. IEEE Transactions on Medical Imaging, 2017, 36, 301-309.	8.9	10
47	Ultrasound detection via low-noise pulse interferometry using a free-space Fabry-PÃ©rot. Optics Express, 2018, 26, 22405.	3.4	10
48	Optoacoustic model-based inversion using anisotropic adaptive total-variation regularization. Photoacoustics, 2019, 16, 100142.	7.8	10
49	Single-pixel imaging of dynamic objects using multi-frame motion estimation. Scientific Reports, 2021, 11, 7712.	3.3	9
50	Ultrasound Detection Arrays via Coded Hadamard Apertures. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 2095-2102.	3.0	9
51	Bragg-soliton formation and pulse compression in a one-dimensional periodic structure. Physical Review E, 2006, 74, 066611.	2.1	8
52	Extracting the structure of highly reflecting fiber Bragg gratings by measuring both the transmission and the reflection spectra. Optics Letters, 2007, 32, 457.	3.3	7
53	Enhanced Sensitivity of Silicon-Photonics-Based Ultrasound Detection via BCB Coating. IEEE Photonics Journal, 2019, 11, 1-11.	2.0	7
54	Algebraic determination of back-projection operators for optoacoustic tomography. Biomedical Optics Express, 2018, 9, 5173.	2.9	7

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55	Inverse scattering algorithm for reconstructing lossy fiber Bragg gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2004, 21, 552.	1.5	6
56	Ultrasound Detection Using Acoustic Apertures. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 120-126.	3.0	6
57	The Impulse Response of Negatively Focused Spherical Ultrasound Detectors and Its Effect on Tomographic Optoacoustic Reconstruction. IEEE Transactions on Medical Imaging, 2019, 38, 2326-2337.	8.9	5
58	Experimental reconstruction of a highly reflecting fiber Bragg grating by using spectral regularization and inverse scattering. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2007, 24, 3284.	1.5	4
59	Reconstruction of long-period fiber gratings from their core-to-core transmission function. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 57.	1.5	3
60	Design of Planar Waveguides With Prescribed Mode-Profile Using Inverse Scattering Theory. IEEE Journal of Quantum Electronics, 2009, 45, 1133-1141.	1.9	3
61	Characterization of the spatio-temporal response of optical fiber sensors to incident spherical waves. , 2014, , .		3
62	Burst-mode pulse interferometry for enabling low-noise multi-channel optical detection of ultrasound. Optics Express, 2022, 30, 8959.	3.4	3
63	Experimental reconstruction of a long-period grating from its core-to-core transmission spectrum. Optics Letters, 2005, 30, 3272.	3.3	2
64	Efficient method for launching in-gap solitons in fiber Bragg gratings using a two-segment apodization profile. Optics Letters, 2008, 33, 678.	3.3	2
65	Increased SNR in acousto-optic imaging via coded ultrasound transmission. Optics Letters, 2020, 45, 2858.	3.3	2
66	Wideband Optical Detector of Ultrasound for Medical Imaging Applications. Journal of Visualized Experiments, 2014, , .	0.3	1
67	MODEL-BASED IMAGE RECONSTRUCTION IN OPTOACOUSTIC TOMOGRAPHY. Series in Computer Vision, 2014, , 133-150.	0.1	0
68	Compressed system models in multispectral optoacoustic tomography. , 2015, , .		0
69	Pulse Interferometry for Ultrasound Detection. , 2019, , .		0