

Michael L Oelze

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

102
papers

2,226
citations

29
h-index

44
g-index

144
ext. papers

2,768
ext. citations

3.5
avg, IF

5.07
L-index

#	Paper	IF	Citations
102	Differentiation and characterization of rat mammary fibroadenomas and 4T1 mouse carcinomas using quantitative ultrasound imaging. <i>IEEE Transactions on Medical Imaging</i> , 2004 , 23, 764-71	11.7	161
101	Review of Quantitative Ultrasound: Envelope Statistics and Backscatter Coefficient Imaging and Contributions to Diagnostic Ultrasound. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2016 , 63, 336-51	3.2	142
100	Characterization of tissue microstructure using ultrasonic backscatter: theory and technique for optimization using a Gaussian form factor. <i>Journal of the Acoustical Society of America</i> , 2002 , 112, 1202-11	11.2	133
99	Three-dimensional high-frequency backscatter and envelope quantification of cancerous human lymph nodes. <i>Ultrasound in Medicine and Biology</i> , 2011 , 37, 345-57	3.5	99
98	Interlaboratory comparison of ultrasonic backscatter coefficient measurements from 2 to 9 MHz. <i>Journal of Ultrasound in Medicine</i> , 2005 , 24, 1235-50	2.9	99
97	Ex vivo study of quantitative ultrasound parameters in fatty rabbit livers. <i>Ultrasound in Medicine and Biology</i> , 2012 , 38, 2238-48	3.5	80
96	Examination of cancer in mouse models using high-frequency quantitative ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2006 , 32, 1639-48	3.5	74
95	Frequency-dependent attenuation-compensation functions for ultrasonic signals backscattered from random media. <i>Journal of the Acoustical Society of America</i> , 2002 , 111, 2308-19	2.2	74
94	Non-invasive evaluation of breast cancer response to chemotherapy using quantitative ultrasonic backscatter parameters. <i>Medical Image Analysis</i> , 2015 , 20, 224-36	15.4	67
93	Identifying ultrasonic scattering sites from three-dimensional impedance maps. <i>Journal of the Acoustical Society of America</i> , 2005 , 117, 413-23	2.2	57
92	Application of three scattering models to characterization of solid tumors in mice. <i>Ultrasonic Imaging</i> , 2006 , 28, 83-96	1.9	56
91	In vivo ultrasonic attenuation slope estimates for detecting cervical ripening in rats: Preliminary results. <i>Journal of the Acoustical Society of America</i> , 2008 , 123, 1794-800	2.2	50
90	Measurement of Attenuation and Speed of Sound in Soils. <i>Soil Science Society of America Journal</i> , 2002 , 66, 788-796	2.5	48
89	Estimation of total attenuation and scatterer size from backscattered ultrasound waveforms. <i>Journal of the Acoustical Society of America</i> , 2005 , 117, 1431-9	2.2	47
88	Defining optimal axial and lateral resolution for estimating scatterer properties from volumes using ultrasound backscatter. <i>Journal of the Acoustical Society of America</i> , 2004 , 115, 3226-34	2.2	45
87	Temperature dependent ultrasonic characterization of biological media. <i>Journal of the Acoustical Society of America</i> , 2011 , 130, 2203-11	2.2	42
86	Comparison of ultrasound attenuation and backscatter estimates in layered tissue-mimicking phantoms among three clinical scanners. <i>Ultrasonic Imaging</i> , 2012 , 34, 209-21	1.9	40

85	Interlaboratory comparison of backscatter coefficient estimates for tissue-mimicking phantoms. <i>Ultrasonic Imaging</i> , 2010 , 32, 48-64	1.9	39
84	Tomographic reconstruction of three-dimensional volumes using the distorted born iterative method. <i>IEEE Transactions on Medical Imaging</i> , 2009 , 28, 1643-53	11.7	38
83	Method of improved scatterer size estimation and application to parametric imaging using ultrasound. <i>Journal of the Acoustical Society of America</i> , 2002 , 112, 3053-63	2.2	37
82	Extended three-dimensional impedance map methods for identifying ultrasonic scattering sites. <i>Journal of the Acoustical Society of America</i> , 2008 , 123, 1195-1208	2.2	36
81	Parametric imaging of rat mammary tumors in vivo for the purposes of tissue characterization. <i>Journal of Ultrasound in Medicine</i> , 2002 , 21, 1201-10	2.9	36
80	Ultrasonic attenuation and backscatter coefficient estimates of rodent-tumor-mimicking structures: comparison of results among clinical scanners. <i>Ultrasonic Imaging</i> , 2011 , 33, 233-50	1.9	35
79	Density imaging using inverse scattering. <i>Journal of the Acoustical Society of America</i> , 2009 , 125, 793-802	2.2	33
78	Production of uniformly sized serum albumin and dextrose microbubbles. <i>Ultrasonics Sonochemistry</i> , 2012 , 19, 198-208	8.9	32
77	On the estimation of backscatter coefficients using single-element focused transducers. <i>Journal of the Acoustical Society of America</i> , 2011 , 129, 2903-11	2.2	32
76	Quantitative ultrasound assessment of the rat cervix. <i>Journal of Ultrasound in Medicine</i> , 2006 , 25, 1031-40	2.9	30
75	Characterization of thyroid cancer in mouse models using high-frequency quantitative ultrasound techniques. <i>Ultrasound in Medicine and Biology</i> , 2013 , 39, 2333-41	3.5	29
74	Cross-imaging system comparison of backscatter coefficient estimates from a tissue-mimicking material. <i>Journal of the Acoustical Society of America</i> , 2012 , 132, 1319-24	2.2	29
73	A contactless ultrasonic surface wave approach to characterize distributed cracking damage in concrete. <i>Ultrasonics</i> , 2017 , 75, 46-57	3.5	28
72	High-intensity focused ultrasound-induced mechanochemical transduction in synthetic elastomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10214-10222	11.5	25
71	Ultrasonic assessment of thermal therapy in rat liver. <i>Ultrasound in Medicine and Biology</i> , 2012 , 38, 2130-7	3.5	23
70	Three-dimensional quantitative ultrasound for detecting lymph node metastases. <i>Journal of Surgical Research</i> , 2013 , 183, 258-69	2.5	18
69	Measurement of Attenuation and Speed of Sound in Soils 2002 , 66, 788		18
68	Improved scatterer property estimates from ultrasound backscatter for small gate lengths using a gate-edge correction factor. <i>Journal of the Acoustical Society of America</i> , 2004 , 116, 3212-23	2.2	17

67	Mbps experimental acoustic through-tissue communications: MEAT-COMMS 2016 ,		14
66	Quantitative ultrasound imaging for monitoring in situ high-intensity focused ultrasound exposure. <i>Ultrasonic Imaging</i> , 2014 , 36, 239-55	1.9	14
65	Cross-imaging platform comparison of ultrasonic backscatter coefficient measurements of live rat tumors. <i>Journal of Ultrasound in Medicine</i> , 2010 , 29, 1117-23	2.9	14
64	Estimation of the acoustic impedance of lung versus level of inflation for different species and ages of animals. <i>Journal of the Acoustical Society of America</i> , 2008 , 124, 2340-52	2.2	14
63	Ultrasonic backscatter coefficients for weakly scattering, agar spheres in agar phantoms. <i>Journal of the Acoustical Society of America</i> , 2010 , 128, 903-8	2.2	13
62	Impedance measurements of ex vivo rat lung at different volumes of inflation. <i>Journal of the Acoustical Society of America</i> , 2003 , 114, 3384-93	2.2	13
61	InVivo Multiparametric Ultrasound Imaging of Structural and Functional Tumor Modifications during Therapy. <i>Ultrasound in Medicine and Biology</i> , 2017 , 43, 2000-2012	3.5	12
60	3-D high-frequency ultrasound backscatter analysis of human articular cartilage. <i>Ultrasound in Medicine and Biology</i> , 2014 , 40, 244-57	3.5	12
59	Experimental application of ultrafast imaging to spectral tissue characterization. <i>Ultrasound in Medicine and Biology</i> , 2015 , 41, 2506-19	3.5	11
58	Roughness Measurements of Soil Surfaces by Acoustic Backscatter. <i>Soil Science Society of America Journal</i> , 2003 , 67, 241-250	2.5	11
57	Emergency ventilator for COVID-19. <i>PLoS ONE</i> , 2020 , 15, e0244963	3.7	11
56	Quantitative Ultrasound Comparison of MAT and 4T1 Mammary Tumors in Mice and Rats Across Multiple Imaging Systems. <i>Journal of Ultrasound in Medicine</i> , 2015 , 34, 1373-83	2.9	10
55	Analysis of human fibroadenomas using three-dimensional impedance maps. <i>IEEE Transactions on Medical Imaging</i> , 2011 , 30, 1206-13	11.7	10
54	Time domain attenuation estimation method from ultrasonic backscattered signals. <i>Journal of the Acoustical Society of America</i> , 2012 , 132, 533-43	2.2	9
53	Roughness Measurements of Soil Surfaces by Acoustic Backscatter 2003 , 67, 241		8
52	Ultrasound microbubble potentiated enhancement of hyperthermia-effect in tumours. <i>PLoS ONE</i> , 2019 , 14, e0226475	3.7	8
51	Improving Spatial Resolution Using Incoherent Subtraction of Receive Beams Having Different Apodizations. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2019 , 66, 5-17	3.2	8
50	Characterizing Fatty Liver in vivo in Rabbits, Using Quantitative Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2019 , 45, 2049-2062	3.5	7

49	Amplitude modulated chirp excitation to reduce grating lobes and maintain ultrasound intensity at the focus of an array. <i>Ultrasonics</i> , 2013 , 53, 1293-303	3.5	7
48	Exploring potential mechanisms responsible for observed changes of ultrasonic backscattered energy with temperature variations. <i>Medical Physics</i> , 2014 , 41, 052901	4.4	7
47	Assessment of high-intensity focused ultrasound treatment of rodent mammary tumors using ultrasound backscatter coefficients. <i>Journal of the Acoustical Society of America</i> , 2013 , 134, 1559-68	2.2	7
46	Synergistic effects of ultrasound-activated microbubbles and doxorubicin on short-term survival of mouse mammary tumor cells. <i>Ultrasonic Imaging</i> , 2012 , 34, 15-22	1.9	7
45	Improving the quality of QUS imaging using full angular spatial compounding 2008 ,		7
44	Improved scatterer size estimation using backscatter coefficient measurements with coded excitation and pulse compression. <i>Journal of the Acoustical Society of America</i> , 2008 , 123, 4599-607	2.2	7
43	Roughness characterization of porous soil with acoustic backscatter. <i>Journal of the Acoustical Society of America</i> , 2001 , 109, 1826-32	2.2	7
42	Low-Complexity System and Algorithm for an Emergency Ventilator Sensor and Alarm. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2020 , 14, 1088-1096	5.1	7
41	Visualization of the Intensity Field of a Focused Ultrasound Source In Situ. <i>IEEE Transactions on Medical Imaging</i> , 2019 , 38, 124-133	11.7	6
40	Quantitative ultrasound techniques and improvements to diagnostic ultrasonic imaging 2012 ,		6
39	High-frequency ultrasound detection of cell death: Spectral differentiation of different forms of cell death. <i>Oncoscience</i> , 2016 , 3, 275-287	0.8	6
38	Backscatter coefficient estimation using tapers with gaps. <i>Ultrasonic Imaging</i> , 2015 , 37, 117-34	1.9	5
37	Small lesion detection with resolution enhancement compression. <i>Ultrasonic Imaging</i> , 2010 , 32, 16-32	1.9	5
36	A quantitative ultrasound-based method and device for reliably guiding pathologists to metastatic regions of dissected lymph nodes 2012 ,		5
35	Two approaches for tomographic density imaging using inverse scattering 2008 ,		5
34	Optimization of microbubble enhancement of hyperthermia for cancer therapy in an in vivo breast tumour model. <i>PLoS ONE</i> , 2020 , 15, e0237372	3.7	5
33	Using two-dimensional impedance maps to study weak scattering in sparse random media. <i>Journal of the Acoustical Society of America</i> , 2016 , 139, 1557	2.2	5
32	Scattering by an arrangement of eccentric cylinders embedded on a coated cylinder with applications to tomographic density imaging. <i>Journal of the Acoustical Society of America</i> , 2010 , 127, 645-8	2.2	4

31	Estimating concentration of ultrasound contrast agents with backscatter coefficients: experimental and theoretical aspects. <i>Journal of the Acoustical Society of America</i> , 2012 , 131, 2295-305	2.2	4
30	Application of an acoustic backscatter technique for characterizing the roughness of porous soil. <i>Journal of the Acoustical Society of America</i> , 2002 , 111, 1565-77	2.2	4
29	Species-Independent Modeling of High-Frequency Ultrasound Backscatter in Hyaline Cartilage. <i>Ultrasound in Medicine and Biology</i> , 2016 , 42, 1375-84	3.5	4
28	Scattering by single physically large and weak scatterers in the beam of a single-element transducer. <i>Journal of the Acoustical Society of America</i> , 2015 , 137, 1153-63	2.2	3
27	Effects of acoustic nonlinearities on the ultrasonic backscatter coefficient estimation. <i>Journal of the Acoustical Society of America</i> , 2019 , 146, 85	2.2	3
26	Improving the quality of attenuation imaging using full angular spatial compounding 2014 ,		3
25	Enhancing cell kill in vitro from hyperthermia through pre-sensitizing with ultrasound-stimulated microbubbles. <i>Journal of the Acoustical Society of America</i> , 2015 , 138, EL493-7	2.2	3
24	Implementation of scatterer size imaging on an ultrasonic breast tomography scanner 2009 ,		3
23	Video-Capable Ultrasonic Wireless Communications Through Biological Tissues. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021 , 68, 664-674	3.2	3
22	Effects of the container on structure function with impedance map analysis of dense scattering media. <i>Journal of the Acoustical Society of America</i> , 2018 , 143, 2172	2.2	2
21	Limitations on estimation of effective scatterer diameters. <i>Journal of the Acoustical Society of America</i> , 2017 , 142, 3677	2.2	2
20	Improving lateral resolution in ultrasonic Imaging by utilizing nulls in the beam pattern 2015 ,		2
19	A new approach for detecting attenuation changes during high-intensity focused ultrasound 2010 ,		2
18	Assessment of the effects of scatterer size distributions on effective scatterer diameter estimates 2010 ,		2
17	Improving image contrast using coded excitation for ultrasonic imaging 2010 ,		2
16	Use of quantitative ultrasound to detect temperature variations in biological phantoms due to heating 2009 ,		2
15	An improved method for tomographic density imaging using a multiple frequency inverse scattering approach 2009 ,		2
14	Low-frequency sound wave parameter measurement in gravels. <i>Applied Acoustics</i> , 2010 , 71, 45-51	3.1	2

13	Use of a convolutional neural network and quantitative ultrasound for diagnosis of fatty liver. <i>Ultrasound in Medicine and Biology</i> , 2021 , 47, 556-568	3.5	2
12	Total attenuation compensation for backscatter coefficient estimation using full angular spatial compounding. <i>Ultrasonics</i> , 2021 , 114, 106376	3.5	2
11	Estimation of Backscatter Coefficients Using an In Situ Calibration Source. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2020 , 67, 308-317	3.2	1
10	Focused Ultrasound Treatment of Cervical Lymph Nodes in Rats with EAE: A Pilot Study. <i>Ultrasound in Medicine and Biology</i> , 2016 , 42, 2957-2964	3.5	1
9	Quantitative imaging of temperature elevations in tissues due to thermal therapies 2014 ,		1
8	Changes in quantitative ultrasound parameters during HIFU application 2012 ,		1
7	Combined therapy planning, real-time monitoring, and low intensity focused ultrasound treatment using a diagnostic imaging array.. <i>IEEE Transactions on Medical Imaging</i> , 2022 , PP,	11.7	1
6	Real-Time Visualization of a Focused Ultrasound Beam Using Ultrasonic Backscatter for Monitoring of Mechanical-Based Therapies 2020 ,		1
5	Effects of acoustic nonlinearity on pulse-echo attenuation coefficient estimation from tissue-mimicking phantoms. <i>Journal of the Acoustical Society of America</i> , 2020 , 148, 805	2.2	1
4	Real-Time Visualization of a Focused Ultrasound Beam Using Ultrasonic Backscatter. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021 , 68, 1213-1223	3.2	1
3	High Data Rate Communications In Vivo Using Ultrasound. <i>IEEE Transactions on Biomedical Engineering</i> , 2021 , 68, 3308-3316	5	1
2	Theory of Ultrasound Physics and Imaging 2018 , 7-28		
1	Identifying and overcoming limitations with in situ calibration beads for quantitative ultrasound.. <i>Journal of the Acoustical Society of America</i> , 2022 , 151, 2701	2.2	