James G Miller

List of Publications by Citations

119 papers	4,096 citations	37 h-index	60 g-index
126 ext. papers	4,474 ext. citations	3 avg, IF	4.52 L-index

#	Paper	IF	Citations
119	A novel site-targeted ultrasonic contrast agent with broad biomedical application. *Circulation*, **1996**, 94, 3334-40	16.7	294
118	On-line assessment of ventricular function by automatic boundary detection and ultrasonic backscatter imaging. *Journal of the American College of Cardiology*, **1992**, 19, 313-20	15.1	262
117	Ultrasonic characterization of myocardium. *Progress in Cardiovascular Diseases*, **1985**, 28, 85-110	8.5	185
116	On the applicability of Kramers-Kronig relations for ultrasonic attenuation obeying a frequency power law. *Journal of the Acoustical Society of America*, **2000**, 108, 556-63	2.2	127
115	Causality-imposed (Kramers-Kronig) relationships between attenuation and dispersion. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2005**, 52, 822-33	3.2	126
114	Abnormal myocardial acoustic properties in diabetic patients and their correlation with the severity of disease. *Journal of the American College of Cardiology*, **1992**, 19, 1154-62	15.1	122
113	Ultrasound integrated backscatter tissue characterization of remote myocardial infarction in human subjects. *Journal of the American College of Cardiology*, **1989**, 13, 84-91	15.1	100
112	Automated, on-line quantification of left ventricular dimensions and function by echocardiography with backscatter imaging and lateral gain compensation. *American Journal of Cardiology*, **1992**, 70, 1200-5	3	97
111	Early identification with ultrasonic integrated backscatter of viable but stunned myocardium in dogs. *Journal of the American College of Cardiology*, **1989**, 14, 462-71	15.1	93
110	In vivo molecular imaging of stretch-induced tissue factor in carotid arteries with ligand-targeted nanoparticles. *Journal of the American Society of Echocardiography*, **2000**, 13, 608-14	5.8	92
109	In vitro characterization of a novel, tissue-targeted ultrasonic contrast system with acoustic microscopy. *Journal of the Acoustical Society of America*, **1998**, 104, 3665-72	2.2	92
108	Detection of cardiomyopathic changes induced by doxorubicin based on quantitative analysis of ultrasonic backscatter. *American Journal of Cardiology*, **1981**, 47, 1056-60	3	89
107	High-frequency ultrasonic detection of thrombi with a targeted contrast system. *Ultrasound in Medicine and Biology*, **1997**, 23, 863-70	3.5	81
106	Anisotropy of the ultrasonic attenuation in soft tissues: measurements in vitro. *Journal of the Acoustical Society of America*, **1990**, 88, 1203-10	2.2	79
105	Detection of ischemic myocardium in vivo through the chest wall by quantitative ultrasonic tissue characterization. *American Journal of Cardiology*, **1982**, 50, 838-43	3	79
104	Applicability of ultrasonic tissue characterization for longitudinal assessment and differentiation of calcification and fibrosis in cardiomyopathy. *Journal of the American College of Cardiology*, **1984**, 4, 88-95	15.1	76
103	The extracellular matrix is an important source of ultrasound backscatter from myocardium. *Journal of the Acoustical Society of America*, **2000**, 107, 612-9	2.2	66

102	Differential forms of the Kramers-Kr□ig dispersion relations. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2003**, 50, 68-76	3.2	61
101	Ultrasonic determination of the anisotropy of Young□s modulus of fixed tendon and fixed myocardium. *Journal of the Acoustical Society of America*, **1996**, 100, 3933-40	2.2	61
100	A proposed microscopic elastic wave theory for ultrasonic backscatter from myocardial tissue. *Journal of the Acoustical Society of America*, **1995**, 97, 656-68	2.2	58
99	Anomalous negative dispersion in bone can result from the interference of fast and slow waves. *Journal of the Acoustical Society of America*, **2006**, 120, EL55-61	2.2	57
98	Interference between wave modes may contribute to the apparent negative dispersion observed in cancellous bone. *Journal of the Acoustical Society of America*, **2008**, 124, 1781-9	2.2	55
97	Broadband through-transmission signal loss measurements of Albunex□ suspensions at concentrations approaching in vivo doses. *Journal of the Acoustical Society of America*, **1997**, 101, 1155-1161	2.2	54
96	Effects of myocardial fiber orientation in echocardiography: quantitative measurements and computer simulation of the regional dependence of backscattered ultrasound in the parasternal short-axis view. *Journal of the American Society of Echocardiography*, **1998**, 11, 929-37	5.8	54
95	Cyclic Variation of Integrated Backscatter: Dependence of Time Delay on the Echocardiographic View Used and the Myocardial Segment Analyzed. *Journal of the American Society of Echocardiography*, **2000**, 13, 9-17	5.8	51
94	Progress in quantitative ultrasonic characterization of myocardium: from the laboratory to the bedside. *Journal of the American Society of Echocardiography*, **1988**, 1, 294-305	5.8	50
93	Differentiation between acutely ischemic myocardium and zones of completed infarction in dogs on the basis of frequency-dependent backscatter. *Journal of the Acoustical Society of America*, **1989**, 85, 2634-41	2.2	49
92	Broadband measurements of phase velocity in Albunex suspensions. *Journal of the Acoustical Society of America*, **1998**, 103, 2145-53	2.2	48
91	Anisotropy of ultrasonic velocity and elastic properties in normal human myocardium. *Journal of the Acoustical Society of America*, **1992**, 92, 3039-50	2.2	47
90	Comparison of the anisotropy of apparent integrated ultrasonic backscatter from fixed human tendon and fixed human myocardium. *Journal of the Acoustical Society of America*, **1995**, 97, 1307-13	2.2	44
89	Frequency and concentration dependence of the backscatter coefficient of the ultrasound contrast agent Albunex□ . *Journal of the Acoustical Society of America*, **1998**, 104, 1654-1666	2.2	43
88	On a time-domain representation of the Kramers-Kronig dispersion relations. *Journal of the Acoustical Society of America*, **2000**, 108, 2114-9	2.2	42
87	Measurements and predictions of the phase velocity and attenuation coefficient in suspensions of elastic microspheres. *Journal of the Acoustical Society of America*, **1999**, 106, 652-659	2.2	42
86	Quantification of ultrasonic anisotropy in normal myocardium with lateral gain compensation of two-dimensional integrated backscatter images. *Ultrasound in Medicine and Biology*, **1993**, 19, 497-505	3.5	41
85	Bayesian estimation of the underlying bone properties from mixed fast and slow mode ultrasonic signals. *Journal of the Acoustical Society of America*, **2007**, 121, EL8-15	2.2	39

84	Anisotropy of the apparent frequency dependence of backscatter in formalin fixed human myocardium. *Journal of the Acoustical Society of America*, **1997**, 101, 563-8	2.2	38
83	Characterization of anisotropic myocardial backscatter using spectral slope, intercept and midband fit parameters. *Ultrasonic Imaging*, **2007**, 29, 122-34	1.9	37
82	Effect of collagen on the anisotropy of quasi-longitudinal mode ultrasonic velocity in fibrous soft tissues: a comparison of fixed tendon and fixed myocardium. *Journal of the Acoustical Society of America*, **1994**, 96, 1957-64	2.2	37
81	Myocardial ultrasonic backscatter for characterization of ischemia and reperfusion: relationship to wall motion. *Ultrasound in Medicine and Biology*, **1990**, 16, 391-8	3.5	35
80	Negative dispersion in bone: the role of interference in measurements of the apparent phase velocity of two temporally overlapping signals. *Journal of the Acoustical Society of America*, **2008**, 123, 2407-14	2.2	34
79	Broadband measurements of the attenuation coefficient and backscatter coefficient for suspensions: A potential calibration tool. *Journal of the Acoustical Society of America*, **1997**, 101, 1162-1171	2.2	33
78	Quantitative assessment of myocardial ultrasound tissue characterization through receiver operating characteristic analysis of Bayesian classifiers. *Journal of the American College of Cardiology*, **1995**, 25, 1706-11	15.1	32
77	Anisotropy of the slope of ultrasonic attenuation in formalin fixed human myocardium. *Journal of the Acoustical Society of America*, **1996**, 99, 3837-43	2.2	32
76	Determining attenuation properties of interfering fast and slow ultrasonic waves in cancellous bone. *Journal of the Acoustical Society of America*, **2011**, 130, 2233-40	2.2	30
75	Inverse problems in cancellous bone: estimation of the ultrasonic properties of fast and slow waves using Bayesian probability theory. *Journal of the Acoustical Society of America*, **2010**, 128, 2940-8	2.2	29
74	Detection of remote myocardial infarction with quantitative real-time ultrasonic characterization. *Journal of the American Society of Echocardiography*, **1988**, 1, 179-86	5.8	27
73	Finite amplitude measurements of the nonlinear parameter B/A for liquid mixtures spanning a range relevant to tissue harmonic mode. *Ultrasound in Medicine and Biology*, **2007**, 33, 620-9	3.5	25
72	Kramers-Kronig relations applied to finite bandwidth data from suspensions of encapsulated microbubbles. *Journal of the Acoustical Society of America*, **2000**, 108, 2091-106	2.2	24
71	Application of phase-insensitive detection and frequency-dependent measurements to computed ultrasonic attenuation tomography. *IEEE Transactions on Biomedical Engineering*, **1981**, 28, 186-201	5	24
70	Measurements of the anisotropy of ultrasonic attenuation in freshly excised myocardium. *Journal of the Acoustical Society of America*, **2006**, 119, 3130-9	2.2	23
69	Quantification of ventricular remodeling in the tight-skin mouse cardiomyopathy with acoustic microscopy. *Ultrasound in Medicine and Biology*, **1993**, 19, 365-74	3.5	23
68	Cancellous bone fast and slow waves obtained with Bayesian probability theory correlate with porosity from computed tomography. *Journal of the Acoustical Society of America*, **2012**, 132, 1830-7	2.2	21
67	Two-dimensional echocardiographic automatic boundary detection for evaluation of left ventricular function in unselected adult patients. *Journal of the American Society of Echocardiography*, **1994**, 7, 459-64	5.8	21

66	Quantitative ultrasonic imaging: tissue characterization and instantaneous quantification of cardiac function. *American Journal of Cardiology*, **1992**, 69, 104H-111H	3	21
65	Contraction-related variation in frequency dependence of acoustic properties of canine myocardium. *Journal of the Acoustical Society of America*, **1989**, 86, 2067-72	2.2	21
64	Cardiac cycle-dependent variation of integrated backscatter is not distorted by abnormal myocardial wall motion in human subjects with paradoxical septal motion. *Ultrasound in Medicine and Biology*, **1989**, 15, 311-7	3.5	21
63	Measurements of the anisotropy of ultrasonic velocity in freshly excised and formalin-fixed myocardial tissue. *Journal of the Acoustical Society of America*, **2005**, 118, 505-13	2.2	20
62	Ultrasonic tissue characterization of end-stage dilated cardiomyopathy. *Ultrasound in Medicine and Biology*, **1995**, 21, 853-60	3.5	20
61	Identification of human myocardial infarction in vitro based on the frequency dependence of ultrasonic backscatter. *Journal of the Acoustical Society of America*, **1992**, 91, 3018-25	2.2	20
60	Potential relationships among myocardial stiffness, the measured level of myocardial backscatter ("image brightness"), and the magnitude of the systematic variation of backscatter (cyclic variation) over the heart cycle. *Journal of the American Society of Echocardiography*, **2004**, 17, 1131-7	5.8	19
59	Dissociation between wall thickening of normal myocardium and cyclic variation of backscatter during inotropic stimulation. *American Journal of Cardiology*, **1996**, 77, 515-20	3	19
58	Dependence of "apparent" magnitude on the time delay of cyclic variation of myocardial backscatter. *Ultrasound in Medicine and Biology*, **1999**, 25, 759-62	3.5	18
57	Estimation of the elastic stiffness coefficient c13 of fixed tendon and fixed myocardium. *Journal of the Acoustical Society of America*, **1995**, 97, 3171-6	2.2	18
56	Anisotropy of the transverse mode ultrasonic properties of fixed tendon and fixed myocardium. *Journal of the Acoustical Society of America*, **1996**, 99, 3826-36	2.2	18
55	Changes in ultrasonic attenuation and backscatter of muscle with state of contraction. *Ultrasound in Medicine and Biology*, **1985**, 11, 605-10	3.5	18
54	Transmural variation of myocardial attenuation measured with a clinical imager. *Ultrasound in Medicine and Biology*, **2001**, 27, 1643-50	3.5	17
53	Anisotropy of apparent backscatter in the short-axis view of mouse hearts. *Ultrasound in Medicine and Biology*, **2005**, 31, 1623-9	3.5	16
52	Experimental validation of the use of Kramers-Kronig relations to eliminate the phase sheet ambiguity in broadband phase spectroscopy. *Journal of the Acoustical Society of America*, **2001**, 109, 2236-44	2.2	16
51	Ultrasonic integrated backscatter two-dimensional imaging: evaluation of M-mode guided acquisition and immediate analysis in 55 consecutive patients. *Journal of the American Society of Echocardiography*, **1990**, 3, 255-65	5.8	16
50	Is the Kramers-Kronig relationship between ultrasonic attenuation and dispersion maintained in the presence of apparent losses due to phase cancellation?. *Journal of the Acoustical Society of America*, **2007**, 122, 222-8	2.2	15
49	Estimating myocardial attenuation from M-mode ultrasonic backscatter. *Ultrasound in Medicine and Biology*, **2005**, 31, 477-84	3.5	15

48	Ultrasonic tissue characterization: review of an approach to assess hypertrophic myocardium. *Echocardiography*, **2001**, 18, 593-7	1.5	15
47	Measurements of the cyclic variation of myocardial backscatter from two-dimensional echocardiographic images as an approach for characterizing diabetic cardiomyopathy. *Journal of the Cardiometabolic Syndrome*, **2006**, 1, 149-52		14
46	Ultrasonic tissue characterization of the mouse myocardium: successful in vivo cyclic variation measurements. *Journal of the American Society of Echocardiography*, **2004**, 17, 883-92	5.8	14
45	Causal determination of acoustic group velocity and frequency derivative of attenuation with finite-bandwidth Kramers-Kronig relations. *Physical Review E*, **2005**, 72, 016604	2.4	14
44	Frequency dependence of acoustic backscatter from 5 to 65 MHz (0.06 Journal of the Acoustical Society of America, **1996**, 100, 1841-8	2.2	13
43	Differentiation of normal and ischemic right ventricular myocardium with quantitative two-dimensional integrated backscatter imaging. *Ultrasound in Medicine and Biology*, **1992**, 18, 249-53	3.5	13
42	Ultrasonic myocardial tissue characterization in the operating room: initial results using transesophageal echocardiography. *Journal of the American Society of Echocardiography*, **1991**, 4, 541-6	5.8	13
41	The frequency dependence of ultrasonic velocity and the anisotropy of dispersion in both freshly excised and formalin-fixed myocardium. *Ultrasound in Medicine and Biology*, **2006**, 32, 603-10	3.5	12
40	Comparison of integrated backscatter values obtained with acoustic densitometry with values derived from spectral analysis of digitized signals from a clinical imaging system. *Journal of the American Society of Echocardiography*, **1997**, 10, 511-7	5.8	11
39	Elastic stiffness coefficients (c11, C33, and C13) for freshly excised and formalin-fixed myocardium from ultrasonic velocity measurements. *Journal of the Acoustical Society of America*, **2006**, 119, 1880-7	2.2	11
38	Effects of tissue anisotropy and contrast acoustic properties on myocardial scattering in contrast echocardiography. *Journal of the American Society of Echocardiography*, **1999**, 12, 564-73	5.8	11
37	Broadband measurement of the scattering-to-attenuation ratio for Albunex at 37 degrees C. *Ultrasound in Medicine and Biology*, **1999**, 25, 1321-4	3.5	10
36	Bone sonometry: reducing phase aberration to improve estimates of broadband ultrasonic attenuation. *Journal of the Acoustical Society of America*, **2009**, 125, 522-9	2.2	9
35	Effects of region-of-interest length on estimates of myocardial ultrasonic attenuation and backscatter. *Medical Physics*, **2005**, 32, 418-26	4.4	9
34	Broadband time-domain reflectometry measurement of attenuation and phase velocity in highly attenuating suspensions with application to the ultrasound contrast medium Albunex. *Journal of the Acoustical Society of America*, **2000**, 108, 813-20	2.2	9
33	Transmural variation of myocardial attenuation and its potential effect on contrast-mediated estimates of regional myocardial perfusion. *Journal of the American Society of Echocardiography*, **2001**, 14, 782-8	5.8	8
32	Conventional, Bayesian, and Modified Prony methods for characterizing fast and slow waves in equine cancellous bone. *Journal of the Acoustical Society of America*, **2015**, 138, 594-604	2.2	7
31	Quantitative analysis of the magnitude and time delay of cyclic variation of myocardial backscatter from asymptomatic type 2 diabetes mellitus subjects. *Ultrasound in Medicine and Biology*, **2009**, 35, 1458-67	3.5	7

30	Angiotensin II receptor blockade in Syrian hamster (T0-2) cardiomyopathy does not affect microscopic cardiac material properties: implications for mechanisms of tissue remodeling. *Cardiovascular Drugs and Therapy*, **1997**, 11, 521-9	3.9	7
29	Ultrasonic detection of the anisotropy of protein cross linking in myocardium at diagnostic frequencies. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2007**, 54, 1360-9	3.2	7
28	Effects of tissue anisotropy on the spectral characteristics of ultrasonic backscatter measured with a clinical imaging system. *Ultrasonic Imaging*, **1998**, 20, 178-90	1.9	7
27	Echocardiographic-based assessment of myocardial fiber structure in individual, excised hearts. *Ultrasonic Imaging*, **2012**, 34, 129-41	1.9	6
26	Improved description of shock wave evolution in media with frequency power law dependent attenuation. *Journal of the Acoustical Society of America*, **2001**, 109, 2263-5	2.2	6
25	Anisotropy of the backscatter coefficient of formalin-fixed ovine myocardium. *Journal of the Acoustical Society of America*, **2007**, 122, 581-6	2.2	5
24	Chronological age modifies the microscopic remodeling process in viable cardiac tissue after infarction. *Ultrasound in Medicine and Biology*, **2003**, 29, 659-69	3.5	5
23	Echocardiographic tissue characterization demonstrates differences in the left and right sides of the ventricular septum. *Ultrasound in Medicine and Biology*, **2010**, 36, 1653-61	3.5	4
22	Toward 3-D Echocardiographic Determination of Regional Myofiber Structure. *Ultrasound in Medicine and Biology*, **2016**, 42, 607-18	3.5	3
21	DECOMPOSITION OF INTERFERING ULTRASONIC WAVES IN BONE AND BONE-MIMICKING MATERIALS **2009**,		3
20	Plane wave source with minimal harmonic distortion for investigating nonlinear acoustic properties. *Journal of the Acoustical Society of America*, **2007**, 122, 91-6	2.2	3
19	Phase Velocity of Cancellous Bone: Negative Dispersion Arising from Fast and Slow Waves, Interference, Diffraction, and Phase Cancellation at Piezoelectric Receiving Elements **2011**, 319-330		3
18	Layer-dependent variation in the anisotropy of apparent integrated backscatter from human coronary arteries. *Ultrasound in Medicine and Biology*, **2011**, 37, 632-41	3.5	2
17	The diastolic function to cyclic variation of myocardial ultrasonic backscatter relation: the influence of parameterized diastolic filling (PDF) formalism determined chamber properties. *Ultrasound in Medicine and Biology*, **2011**, 37, 1185-95	3.5	2
16	Estimation of Left Ventricular Ejection Fraction by Semiautomated Edge Detection. *Echocardiography*, **1998**, 15, 713-720	1.5	2
15	Measurement artifacts in sonometry of cancellous bone: The relative impact of phase cancellation and interference on measurements of phase-distorting phantoms **2008**,		2
14	Ultrasonic Imaging and Quantitative Nondestructive Evaluation of the Hearts of Patients **1995**, 1741-1748		2
13	Single mode analysis appears to overestimate the attenuation of human calcaneal bone based on Bayesian-derived fast and slow wave mode analysis **2012**,		1

12	Characterization of the fast wave in cancellous bone using the Bayesian probability theory approach **2011**,		1
11	Ultrasonic backscatter tissue characterization in cardiac diagnosis. *Clinical Cardiology*, **1991**, 14, V4-9	3.3	1
10	Bayesian parameter estimation for characterizing the cyclic variation of echocardiographic backscatter to assess the hearts of asymptomatic type 2 diabetes mellitus subjects. *Ultrasound in Medicine and Biology*, **2011**, 37, 805-12	3.5	1
9	Extracting fast and slow wave velocities and attenuations from experimental measurements of cancellous bone using Bayesian probability theory **2009**,		1
8	Quantitative Echocardiography, Part 2: Automatic Boundary Detection for On-line Assessment of Left Ventricular and Atrial Function. *Journal of Diagnostic Medical Sonography*, **1994**, 10, 95-103	0.4	1
7	Ultrasonic backscatter imaging for characterization of cardiac structure and function. *Developments in Cardiovascular Medicine*, **1993**, 159-168		1
6	Patients with Diabetes and Significant Epicardial Coronary Artery Disease Have Increased Systolic Left Ventricular Apical Rotation and Rotation Rate at Rest. *Echocardiography*, **2016**, 33, 537-45	1.5	1
5	Backscatter from Specific Regions of Human Hearts Obtained from Standard Echocardiography Views **1996**, 1335-1340		1
4	Improving the reproducibility of the cyclic variation of myocardial backscatter. *Ultrasonic Imaging*, **2010**, 32, 243-54	1.9	
3	CLINICAL IMPLEMENTATION OF ULTRASONIC QUANTITATIVE NONDESTRUCTIVE EVALUATION OF THE HEART: A REVIEW. *Nondestructive Testing and Evaluation*, **1998**, 14, 217-235	2	
2	Quantitative Echocardiography, Part 1: Myocardial Tissue Characterization with Analysis of Radiofrequency Signas. *Journal of Diagnostic Medical Sonography*, **1993**, 9, 122-134	0.4	
1	Effects of Inherent Tissue Anisotropy on Measurements Obtained with a Clinical Ultrasonic Imaging System **1997**, 1339-1342		