Kevin J Parker

List of Publications by Year
in descending order

133 papers	4,929 citations	94433 37 h-index	98798 67 g-index
141 all docs	141 docs citations	141 times ranked	2632 citing authors

#	Article	IF	Citations
1	â€œSonoelasticityâ€•images derived from ultrasound signals in mechanically vibrated tissues. Ultrasound in Medicine and Biology, 1990, 16, 231-239.	1.5	424
2	Contrast agents in diagnostic ultrasound. Ultrasound in Medicine and Biology, 1989, 15, 319-333.	1.5	322
3	Tissue elasticity properties as biomarkers for prostate cancer. Cancer Biomarkers, 2008, 4, 213-225.	1.7	245
4	Quantitative Characterization of Viscoelastic Properties of Human Prostate Correlated with Histology. Ultrasound in Medicine and Biology, 2008, 34, 1033-1042.	1.5	188
5	Sono-Elasticity: Medical Elasticity Images Derived from Ultrasound Signals in Mechanically Vibrated Targets. Acoustical Imaging, 1988, , 317-327.	0.2	176
6	New approaches to nonlinear diffractive field propagation. Journal of the Acoustical Society of America, 1991, 90, 488-499.	1.1	157
7	Relationship between shear elastic modulus and passive muscle force: An ex-vivo study. Journal of Biomechanics, 2013, 46, 2053-2059.	2.1	151
8	Quantitative sonoelastography for the<i>in vivo</i>assessment of skeletal muscle viscoelasticity. Physics in Medicine and Biology, 2008, 53, 4063-4080.	3.0	147
9	Ultrasonic attenuation and absorption in liver tissue. Ultrasound in Medicine and Biology, 1983, 9, 363-369.	1.5	143
10	Quantifying the passive stretching response of human tibialis anterior muscle using shear wave elastography. Clinical Biomechanics, 2014, 29, 33-39.	1.2	132
11	A unified view of imaging the elastic properties of tissue. Journal of the Acoustical Society of America, 2005, 117, 2705-2712.	1.1	125
12	Shear Wave Dispersion Measures Liver Steatosis. Ultrasound in Medicine and Biology, 2012, 38, 175-182.	1.5	121
13	Sonoelastographic imaging of interference patterns for estimation of the shear velocity of homogeneous biomaterials. Physics in Medicine and Biology, 2004, 49, 911-922.	3.0	118
14	Congruence of Imaging Estimators and Mechanical Measurements of Viscoelastic Properties of Soft Tissues. Ultrasound in Medicine and Biology, 2007, 33, 1617-1631.	1.5	100
15	Real-Time Shear Velocity Imaging Using Sonoelastographic Techniques. Ultrasound in Medicine and Biology, 2007, 33, 1086-1097.	1.5	98
16	New approaches to the linear propagation of acoustic fields. Journal of the Acoustical Society of America, 1991, 90, 507-521.	1.1	87
17	Longitudinal iso-phase condition and needle pulses. Optics Express, 2016, 24, 28669.	3.4	86
18	Two-Dimensional Sonoelastographic Shear Velocity Imaging. Ultrasound in Medicine and Biology, 2008, 34, 276-288.	1.5	83

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19	Reverberant 3D optical coherence elastography maps the elasticity of individual corneal layers. Nature Communications, 2019, 10, 4895.	12.8	77
20	On estimating the amplitude of harmonic vibration from the Doppler spectrum of reflected signals. Journal of the Acoustical Society of America, 1990, 88, 2702-2712.	1.1	75
21	Sonoelastographic imaging of interference patterns for estimation of shear velocity distribution in biomaterials. Journal of the Acoustical Society of America, 2006, 120, 535-545.	1.1	72
22	Measurement of Ultrasonic Attenuation Within Regions Selected from B-Scan Images. IEEE Transactions on Biomedical Engineering, 1983, BME-30, 431-437.	4.2	70
23	Mouse Liver Dispersion for the Diagnosis of Early-Stage Fatty Liver Disease: A 70-Sample Study. Ultrasound in Medicine and Biology, 2014, 40, 704-713.	1.5	65
24	The thermal pulse decay technique for measuring ultrasonic absorption coefficients. Journal of the Acoustical Society of America, 1983, 74, 1356-1361.	1.1	63
25	Reverberant shear wave fields and estimation of tissue properties. Physics in Medicine and Biology, 2017, 62, 1046-1061.	3.0	60
26	Radiation pattern of a focused transducer: A numerically convergent solution. Journal of the Acoustical Society of America, 1993, 94, 2979-2991.	1.1	50
27	Integration of Crawling Waves in an Ultrasound Imaging System. Part 2: Signal Processing and Applications. Ultrasound in Medicine and Biology, 2012, 38, 312-323.	1.5	48
28	Spatial Angular Compounding Technique for H-Scan Ultrasound Imaging. Ultrasound in Medicine and Biology, 2018, 44, 267-277.	1.5	47
29	Monitoring Early Breast Cancer Response to Neoadjuvant Therapy Using Hâ€Scan Ultrasound Imaging: Preliminary Preclinical Results. Journal of Ultrasound in Medicine, 2019, 38, 1259-1268.	1.7	44
30	Elastography in the Management of Liver Disease. Ultrasound in Medicine and Biology, 2008, 34, 1535-1546.	1.5	43
31	Physical Models of Tissue in Shear Fields11This article is dedicated to our friend and colleague, Robert C. Waag.. Ultrasound in Medicine and Biology, 2014, 40, 655-674.	1.5	42
32	Acoustic coupling from a focused transducer to a flat plate and back to the transducer. Journal of the Acoustical Society of America, 1994, 95, 3049-3054.	1.1	41
33	Real-time H-scan ultrasound imaging using a Verasonics research scanner. Ultrasonics, 2019, 94, 28-36.	3.9	41
34	Comparative study of shear wave-based elastography techniques in optical coherence tomography. Journal of Biomedical Optics, 2017, 22, 035010.	2.6	39
35	Effects of heat conduction and sample size on ultrasonic absorption measurements. Journal of the Acoustical Society of America, 1985, 77, 719-725.	1.1	38
36	Shear Wave Speed Estimation Using Reverberant Shear Wave Fields: Implementation and Feasibility Studies. Ultrasound in Medicine and Biology, 2018, 44, 963-977.	1.5	38

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37	What Do We Know About Shear Wave Dispersion in Normal and Steatotic Livers?. Ultrasound in Medicine and Biology, 2015, 41, 1481-1487.	1.5	37
38	Correspondence: Apodization and Windowing Functions. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1263-1271.	3.0	34
39	An initial study of complete 2D shear wave dispersion images using a reverberant shear wave field. Physics in Medicine and Biology, 2019, 64, 145009.	3.0	33
40	Elastography imaging: the 30 year perspective. Physics in Medicine and Biology, 2020, , .	3.0	33
41	Attenuation measurement uncertainties caused by speckle statistics. Journal of the Acoustical Society of America, 1986, 80, 727-734.	1.1	32
42	Multiparametric ultrasound imaging for the assessment of normal versus steatotic livers. Scientific Reports, 2021, 11, 2655.	3.3	32
43	Integration of Crawling Waves in an Ultrasound Imaging System. Part 1: System and Design Considerations. Ultrasound in Medicine and Biology, 2012, 38, 296-311.	1.5	29
44	Elasticity Estimates from Images of Crawling Waves Generated by Miniature Surface Sources. Ultrasound in Medicine and Biology, 2014, 40, 685-694.	1.5	29
45	Shear Wave Speed Measurements Using Crawling Wave Sonoelastography and Single Tracking Location Shear Wave Elasticity Imaging for Tissue Characterization. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1351-1360.	3.0	29
46	Longitudinal shear waves for elastic characterization of tissues in optical coherence elastography. Biomedical Optics Express, 2019, 10, 3699.	2.9	28
47	Shear Wave Dispersion in Lean Versus Steatotic Rat Livers. Journal of Ultrasound in Medicine, 2015, 34, 1123-1129.	1.7	26
48	Crawling wave optical coherence elastography. Optics Letters, 2016, 41, 847.	3.3	26
49	H-scan sensitivity to scattering size. Journal of Medical Imaging, 2017, 4, 1.	1.5	26
50	Clusters of Ultrasound Scattering Parameters for the Classification of Steatotic and Normal Livers. Ultrasound in Medicine and Biology, 2021, 47, 3014-3027.	1.5	25
51	Shear Wave Elastography in the Living, Perfused, Post-Delivery Placenta. Ultrasound in Medicine and Biology, 2016, 42, 1282-1288.	1.5	23
52	Diagnostic Performance of an Artificial Intelligence System in Breast Ultrasound. Journal of Ultrasound in Medicine, 2022, 41, 97-105.	1.7	23
53	Attenuation of Shear Waves in Normal and Steatotic Livers. Ultrasound in Medicine and Biology, 2019, 45, 895-901.	1.5	22
54	Scattering Signatures of Normal versus Abnormal Livers with Support Vector Machine Classification. Ultrasound in Medicine and Biology, 2020, 46, 3379-3392.	1.5	22

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55	Application of Ultrasonic Waves to Detect Sealworms in Fish Tissue. Journal of Food Science, 1989, 54, 244-247.	3.1	21
56	Real and causal hysteresis elements. Journal of the Acoustical Society of America, 2014, 135, 3381-3389.	1.1	21
57	An approach to viscoelastic characterization of dispersive media by inversion of a general wave propagation model. Journal of Innovative Optical Health Sciences, 2017, 10, 1742008.	1.0	21
58	Group versus Phase Velocity of Shear Waves in Soft Tissues. Ultrasonic Imaging, 2018, 40, 343-356.	2.6	21
59	Fine-tuning the H-scan for discriminating changes in tissue scatterers. Biomedical Physics and Engineering Express, 2020, 6, 045012.	1.2	20
60	Sonographic investigation of flow patterns in the perfused human placenta and their modulation by vasoactive agents with enhanced visualization by the ultrasound contrast agent albunex. , 1999, 27, 513-522.		19
61	Comprehensive Viscoelastic Characterization of Tissues and the Inter-relationship of Shear Wave (Group and Phase) Velocity, Attenuation and Dispersion. Ultrasound in Medicine and Biology, 2020, 46, 3448-3459.	1.5	19
62	The Gaussian Shear Wave in a Dispersive Medium. Ultrasound in Medicine and Biology, 2014, 40, 675-684.	1.5	17
63	H-scan, Shear Wave and Bioluminescent Assessment of the Progression of Pancreatic Cancer Metastases in the Liver. Ultrasound in Medicine and Biology, 2020, 46, 3369-3378.	1.5	17
64	Analysis of Transient Shear Wave in Lossy Media. Ultrasound in Medicine and Biology, 2018, 44, 1504-1515.	1.5	16
65	The first order statistics of backscatter from the fractal branching vasculature. Journal of the Acoustical Society of America, 2019, 146, 3318-3326.	1.1	16
66	Burr, Lomax, Pareto, and Logistic Distributions from Ultrasound Speckle. Ultrasonic Imaging, 2020, 42, 203-212.	2.6	15
67	Speckle statistics of biological tissues in optical coherence tomography. Biomedical Optics Express, 2021, 12, 4179.	2.9	14
68	Disease-Specific Imaging Utilizing Support Vector Machine Classification of H-Scan Parameters: Assessment of Steatosis in a Rat Model. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 720-731.	3.0	14
69	Superresolution imaging of scatterers in ultrasound B-scan imaging. Journal of the Acoustical Society of America, 2012, 131, 4680-4689.	1.1	13
70	The 3D Spatial Autocorrelation of the Branching Fractal Vasculature. Acoustics, 2019, 1, 369-381.	1.4	13
71	Fat and fibrosis as confounding cofactors in viscoelastic measurements of the liver. Physics in Medicine and Biology, 2021, 66, 045024.	3.0	13
72	H-scan analysis of thyroid lesions. Journal of Medical Imaging, 2018, 5, 1.	1.5	13

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73	Comprehensive experimental assessments of rheological modelsâ€™ performance in elastography of soft tissues. Acta Biomaterialia, 2022, 146, 259-273.	8.3	13
74	Shear wave propagation in viscoelastic media: validation of an approximate forward model. Physics in Medicine and Biology, 2019, 64, 025008.	3.0	12
75	Hâ€scan trajectories indicate the progression of specific diseases. Medical Physics, 2021, 48, 5047-5058.	3.0	12
76	Oestreicher and elastography. Journal of the Acoustical Society of America, 2015, 138, 2317-2325.	1.1	11
77	A Preliminary Study of Liver Fat Quantification Using Reported Ultrasound Speed of Sound and Attenuation Parameters. Ultrasound in Medicine and Biology, 2022, 48, 675-684.	1.5	10
78	Quantitative Tissue Characterzation Based on Pulsed-Echo Ultrasound Scans. IEEE Transactions on Biomedical Engineering, 1986, BME-33, 637-643.	4.2	9
79	Carbon Tetrachioride Induced Changes in Ultrasonic Properties of Liver. IEEE Transactions on Biomedical Engineering, 1986, BME-33, 453-460.	4.2	8
80	Experimental classification of surface waves in optical coherence elastography. Proceedings of SPIE, 2016, , .	0.8	8
81	Support vector machine (SVM) based liver classification: fibrosis, steatosis, and inflammation. , 2020, , .		8
82	Breast Ultrasound Volume Sweep Imaging: A New Horizon in Expanding Imaging Access for Breast Cancer Detection. Journal of Ultrasound in Medicine, 2023, 42, 817-832.	1.7	8
83	Methodology to study the three-dimensional spatial distribution of prostate cancer and their dependence on clinical parameters. Journal of Medical Imaging, 2015, 2, 037502.	1.5	7
84	Enhanced resolution pulse-echo imaging with stabilized pulses. Journal of Medical Imaging, 2016, 3, 027003.	1.5	7
85	Enhanced axial and lateral resolution using stabilized pulses. Journal of Medical Imaging, 2017, 4, 027001.	1.5	7
86	Liver Backscatter and the Hepatic Vasculatureâ€™s Autocorrelation Function. Acoustics, 2020, 2, 3-12.	1.4	7
87	Reverberant shear wave phase gradients for elastography. Physics in Medicine and Biology, 2021, 66, 175001.	3.0	7
88	Speckle from branching vasculature: dependence on number density. Journal of Medical Imaging, 2020, 7, 1.	1.5	7
89	Correspondence - Apodization and windowing eigenfunctions. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2014, 61, 1575-1579.	3.0	6
90	2-D Shear wave dispersion images using the reverberant shear wave field approach: application in tissues exhibiting power law response. , 2019, , .		6

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91	Reverberant Elastography for the Elastic Characterization of Anisotropic Tissues. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-12.	2.9	6
92	Experimental study to evaluate the generation of reverberant shear wave fields (R-SWF) in homogenous media. , 2020, , .		6
93	Partially coherent radiation from reverberant chambers. Journal of the Acoustical Society of America, 1984, 76, 309-313.	1.1	5
94	Segmentation of speckle images based on level-crossing statistics. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1991, 8, 490.	1.5	5
95	Hermite scatterers in an ultraviolet sky. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 3845-3848.	2.1	5
96	Validations of the Microchannel Flow Model for Characterizing Vascularized Tissues. Fluids, 2020, 5, 228.	1.7	5
97	Assessing corneal cross-linking with reverberant 3D optical coherence elastography. Journal of Biomedical Optics, 2022, 27, .	2.6	5
98	Crawling wave detection of prostate cancer: Preliminaryin vitroresults. Medical Physics, 2011, 38, 2563-2571.	3.0	4
99	Shear Wave Speed Estimation from Crawling Wave Sonoelastography: A comparison between AM-FM Dominant Component Analysis and Phase Derivation Methods. , 2014, , .		4
100	Crawling Waves Speed Estimation Based on the Dominant Component Analysis Paradigm. Ultrasonic Imaging, 2015, 37, 341-355.	2.6	4
101	Could Linear Hysteresis Contribute to Shear Wave Losses in Tissues?. Ultrasound in Medicine and Biology, 2015, 41, 1100-1104.	1.5	4
102	Biological Effects of Low-Frequency Shear Strain: PhysicalÂDescriptors. Ultrasound in Medicine and Biology, 2016, 42, 1-15.	1.5	4
103	The Ultrasound Needle Pulse. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1045-1049.	3.0	4
104	Detection of early tumor response to abraxane using H-scan imaging: Preliminary results in a small animal model of breast cancer. , 2017, , .		4
105	Perspectives and advances in optical elastography. , 2019, , .		4
106	Disease-specific imaging with H-scan trajectories and support vector machine to visualize the progression of liver diseases. , 2021, , .		4
107	Power laws prevail in medical ultrasound. Physics in Medicine and Biology, 2022, 67, 09TR02.	3.0	4
108	Title is missing!. Journal of Signal Processing Systems, 1997, 17, 201-214.	1.0	3

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109	Temporal artifact minimization in sonoelastography through optimal selection of imaging parameters. Journal of the Acoustical Society of America, 2016, 140, 714-717.	1.1	3
110	Early Detection of Liver Steatosis using Multiparametric Ultrasound Imaging. , 2021, , .		3
111	H-scan imaging and quantitative measurement to distinguish melanoma metastasis. , 2021, , .		3
112	Early assessment of nonalcoholic fatty liver disease using multiparametric ultrasound imaging. , 2020, , .		2
113	Superresolution imaging in ultrasound B-scan imaging. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
114	Shear Wave Speed and Dispersion Measurements Using Crawling Wave Chirps. Ultrasonic Imaging, 2014, 36, 277-290.	2.6	1
115	Effects of aberration in crawling wave sonoelastography. , 2015, , .		1
116	Concentric layered Hermite scatterers. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 1379-1382.	2.1	1
117	The nonlinear ultrasound needle pulse. Journal of the Acoustical Society of America, 2018, 144, 861-871.	1.1	1
118	Vibration sonoelastography. , 2020, , 45-59.		1
119	1009: Elasticity imaging of placental tissue demonstrates potential for disease state discrimination. American Journal of Obstetrics and Gynecology, 2020, 222, S628.	1.3	1
120	The quantification of liver fat from wave speed and attenuation. Physics in Medicine and Biology, 2021, 66, 145011.	3.0	1
121	Viscoelastic characterization of dispersive media by inversion of a general wave propagation model in optical coherence elastography. , 2018, , .		1
122	Local Burr distribution estimator for speckle statistics. Biomedical Optics Express, 2022, 13, 2334.	2.9	1
123	Generalized formulations producing a Burr distribution of speckle statistics. Journal of Medical Imaging, 2022, 9, 023501.	1.5	1
124	On the use of dual acoustic radiation forces to induce shear wave propagation and interference pattern formation. , 2012, , .		0
125	Effects of data acquisition parameters on the quality of sonoelastographic imaging. , 2015, 2015, 3839-42.		0
126	Wavelength average velocity estimator for ultrasound elastography. , 2016, , .		0

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127	Notice of Removal: Enhanced axial and lateral resolution using stabilized pulses. , 2017, , .		0
128	Notice of Removal: The H-scan format for classification of ultrasound scattering. , 2017, , .		0
129	Notice of Removal: The ultrasound needle pulse. , 2017, , .		0
130	A complex elastographic hyperbolic solver (CEHS) to recover frequency dependent complex shear moduli in viscoelastic models utilizing one or more displacement data-sets. Inverse Problems in Science and Engineering, 2018, 26, 1155-1177.	1.2	0
131	Design and Analysis Methods for Trials with AI-Based Diagnostic Devices for Breast Cancer. Journal of Personalized Medicine, 2021, 11, 1150.	2.5	0
132	Speckle statistics of cortical brain tissue in optical coherence tomography. , 2022, , .		0
133	Characterization of viscoelastic media using reverberant shear wave autocorrelation estimator. , 2022, , .		0