

# K Kirk Shung

## List of Publications by Year in descending order

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Version: 2024-02-01

70  
papers

2,998  
citations

109321

35  
h-index

175258

52  
g-index

70  
all docs

70  
docs citations

70  
times ranked

2488  
citing authors

#	ARTICLE	IF	CITATIONS
1	Manipulation and Mechanical Deformation of Leukemia Cells by High-Frequency Ultrasound Single Beam. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 1889-1897.	3.0	5
2	Automated estimation of cancer cell deformability with machine learning and acoustic trapping. Scientific Reports, 2022, 12, 6891.	3.3	3
3	Recent Advancements in Ultrasound Transducer: From Material Strategies to Biomedical Applications. BME Frontiers, 2022, 2022, .	4.5	37
4	Integrin Antibody Decreases Deformability of Patient-Derived Pre-B Acute Lymphocytic Leukemia Cells as Measured by High-Frequency Acoustic Tweezers. Journal of Ultrasound in Medicine, 2020, 39, 589-595.	1.7	5
5	Investigation of Ultrasound-Mediated Intracellular Ca <sup>2+</sup> Oscillations in HIT-T15 Pancreatic Î²-Cell Line. Cells, 2020, 9, 1129.	4.1	7
6	Classification of Breast Cancer Cells Using the Integration of High-Frequency Single-Beam Acoustic Tweezers and Convolutional Neural Networks. Cancers, 2020, 12, 1212.	3.7	12
7	Characterizing the Motility of Chemotherapeutics-Treated Acute Lymphoblastic Leukemia Cells by Time-Lapse Imaging. Cells, 2020, 9, 1470.	4.1	0
8	Monitoring of Adult Zebrafish Heart Regeneration Using High-Frequency Ultrasound Spectral Doppler and Nakagami Imaging. Sensors, 2019, 19, 4094.	3.8	12
9	Investigation of Optimized Treatment Conditions for Acoustic-Transfection Technique for Intracellular Delivery of Macromolecules. Ultrasound in Medicine and Biology, 2018, 44, 622-634.	1.5	10
10	Low-Intensity Ultrasound Modulates Ca <sup>2+</sup> Dynamics in Human Mesenchymal Stem Cells via Connexin 43 Hemichannel. Annals of Biomedical Engineering, 2018, 46, 48-59.	2.5	22
11	High-Resolution Shear Wave Imaging of the Human Cornea Using a Dual-Element Transducer. Sensors, 2018, 18, 4244.	3.8	26
12	Characterizing Deformability of Drug Resistant Patient-Derived Acute Lymphoblastic Leukemia (ALL) Cells Using Acoustic Tweezers. Scientific Reports, 2018, 8, 15708.	3.3	16
13	Quantitative Assessment of Thin-Layer Tissue Viscoelastic Properties Using Ultrasonic Micro-Elastography With Lamb Wave Model. IEEE Transactions on Medical Imaging, 2018, 37, 1887-1898.	8.9	44
14	Single-Beam Acoustic Trapping of Red Blood Cells and Polystyrene Microspheres in Flowing Red Blood Cell Saline and Plasma Suspensions. Ultrasound in Medicine and Biology, 2017, 43, 852-859.	1.5	17
15	Development of a Low-Complexity, Cost-Effective Digital Beamformer Architecture for High-Frequency Ultrasound Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1002-1008.	3.0	9
16	Acoustic-transfection for genomic manipulation of single-cells using high frequency ultrasound. Scientific Reports, 2017, 7, 5275.	3.3	40
17	Intravascular Ultrasound Imaging With Virtual Source Synthetic Aperture Focusing and Coherence Factor Weighting. IEEE Transactions on Medical Imaging, 2017, 36, 2171-2178.	8.9	21
18	Functional Assay of Cancer Cell Invasion Potential Based on Mechanotransduction of Focused Ultrasound. Frontiers in Oncology, 2017, 7, 161.	2.8	29

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19	Direct and sustained intracellular delivery of exogenous molecules using acoustic-transfection with high frequency ultrasound. <i>Scientific Reports</i> , 2016, 6, 20477.	3.3	44
20	Cell Deformation by Single-beam Acoustic Trapping: A Promising Tool for Measurements of Cell Mechanics. <i>Scientific Reports</i> , 2016, 6, 27238.	3.3	59
21	A Review of Intravascular Ultrasound-based Multimodal Intravascular Imaging. <i>Ultrasonic Imaging</i> , 2016, 38, 314-331.	2.6	44
22	Impedance matching network for high frequency ultrasonic transducer for cellular applications. <i>Ultrasonics</i> , 2016, 65, 258-267.	3.9	40
23	Multi-frequency intravascular ultrasound (IVUS) imaging. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2015, 62, 97-107.	3.0	112
24	Angled-focused 45MHz PMN-PT single element transducer for intravascular ultrasound imaging. <i>Sensors and Actuators A: Physical</i> , 2015, 228, 16-22.	4.1	31
25	High-frequency dual mode pulsed wave Doppler imaging for monitoring the functional regeneration of adult zebrafish hearts. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20141154.	3.4	16
26	Acoustic tweezers for studying intracellular calcium signaling in SKBR-3 human breast cancer cells. <i>Ultrasonics</i> , 2015, 63, 94-101.	3.9	33
27	High-resolution harmonic motion imaging (HR-HMI) for tissue biomechanical property characterization. <i>Quantitative Imaging in Medicine and Surgery</i> , 2015, 5, 108-17.	2.0	8
28	Trimodality imaging system and intravascular endoscopic probe: combined optical coherence tomography, fluorescence imaging and ultrasound imaging. <i>Optics Letters</i> , 2014, 39, 6652.	3.3	33
29	Confocal acoustic radiation force optical coherence elastography using a ring ultrasonic transducer. <i>Applied Physics Letters</i> , 2014, 104, 123702.	3.3	39
30	A feasibility study of <i>in vivo</i> applications of single beam acoustic tweezers. <i>Applied Physics Letters</i> , 2014, 105, 173701.	3.3	41
31	Spectroscopic intravascular photoacoustic imaging of lipids in atherosclerosis. <i>Journal of Biomedical Optics</i> , 2014, 19, 026006.	2.6	63
32	Catheter-based photoacoustic endoscope. <i>Journal of Biomedical Optics</i> , 2014, 19, 1.	2.6	52
33	Integrated IVUS-OCT Imaging for Atherosclerotic Plaque Characterization. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2014, 20, 196-203.	2.9	53
34	Integrated IVUS-OCT for Real-Time Imaging of Coronary Atherosclerosis. <i>JACC: Cardiovascular Imaging</i> , 2014, 7, 101-103.	5.3	51
35	Non-contact High-Frequency Ultrasound Microbeam Stimulation for Studying Mechanotransduction in Human Umbilical Vein Endothelial Cells. <i>Ultrasound in Medicine and Biology</i> , 2014, 40, 2172-2182.	1.5	32
36	Cell membrane deformation induced by a fibronectin-coated polystyrene microbead in a 200-MHz acoustic trap. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014, 61, 399-406.	3.0	29

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37	High-speed Intravascular Photoacoustic Imaging of Lipid-laden Atherosclerotic Plaque Enabled by a 2-RHz Barium Nitrite Raman Laser. Scientific Reports, 2014, 4, 6889.	3.3	107
38	Investigating contactless high frequency ultrasound microbeam stimulation for determination of invasion potential of breast cancer cells. Biotechnology and Bioengineering, 2013, 110, 2697-2705.	3.3	48
39	A study of the adult zebrafish ventricular function by retrospective doppler-gated ultrahigh-frame-rate echocardiography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1827-1837.	3.0	30
40	Combined chirp coded tissue harmonic and fundamental ultrasound imaging for intravascular ultrasound: 20â€“60MHz phantom and ex vivo results. Ultrasonics, 2013, 53, 369-376.	3.9	21
41	Improved fabrication of focused single element P(VDFâ€“TrFE) transducer for high frequency ultrasound applications. Ultrasonics, 2013, 53, 455-458.	3.9	31
42	A simple method for evaluating the trapping performance of acoustic tweezers. Applied Physics Letters, 2013, 102, 84102.	3.3	27
43	Miniature optical coherence tomography-ultrasound probe for automatically coregistered three-dimensional intracoronary imaging with real-time display. Journal of Biomedical Optics, 2013, 18, 1.	2.6	39
44	Resonant acoustic radiation force optical coherence elastography. Applied Physics Letters, 2013, 103, 103704.	3.3	56
45	High-Resolution Acoustic-Radiation-Force-Impulse Imaging for Assessing Corneal Sclerosis. IEEE Transactions on Medical Imaging, 2013, 32, 1316-1324.	8.9	47
46	Acoustic trapping with a high frequency linear phased array. Applied Physics Letters, 2012, 101, 214104.	3.3	33
47	Integrated intravascular optical coherence tomography (OCT) - ultrasound (US) catheter for characterization of atherosclerotic plaques in vivo. , 2012, 2012, 3175-8.		2
48	Focused high frequency needle transducer for ultrasonic imaging and trapping. Applied Physics Letters, 2012, 101, 24105.	3.3	37
49	80-MHz intravascular ultrasound transducer using PMN-PT free-standing film. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 2281-2288.	3.0	71
50	Multimodal characterization of compositional, structural and functional features of human atherosclerotic plaques. Biomedical Optics Express, 2011, 2, 2288.	2.9	40
51	Particle manipulation in a microfluidic channel using acoustic trap. Biomedical Microdevices, 2011, 13, 779-788.	2.8	42
52	Integrated ultrasound and photoacoustic probe for co-registered intravascular imaging. Journal of Biomedical Optics, 2011, 16, 106001.	2.6	61
53	Novel combined miniature optical coherence tomography ultrasound probe for in vivo intravascular imaging. Journal of Biomedical Optics, 2011, 16, 060505.	2.6	69
54	Transverse Acoustic Trapping Using a Gaussian Focused Ultrasound. Ultrasound in Medicine and Biology, 2010, 36, 350-355.	1.5	58

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55	Integrated intravascular optical coherence tomography ultrasound imaging system. Journal of Biomedical Optics, 2010, 15, 010512.	2.6	75
56	High-resolution coregistered intravascular imaging with integrated ultrasound and optical coherence tomography probe. Applied Physics Letters, 2010, 97, 133702.	3.3	72
57	A dual-modality probe utilizing intravascular ultrasound and optical coherence tomography for intravascular imaging applications. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 2839-2843.	3.0	47
58	Single beam acoustic trapping. Applied Physics Letters, 2009, 95, 73701.	3.3	199
59	Non-Rigid Ultrasound Image Registration Based on Intensity and Local Phase Information. Journal of Signal Processing Systems, 2009, 54, 33-43.	2.1	26
60	High frequency ultrasound: A new frontier for ultrasound. , 2009, 2009, 1953-5.		19
61	Measurements of attenuation coefficient for evaluating the hardness of a cataract lens by a high-frequency ultrasonic needle transducer. Physics in Medicine and Biology, 2009, 54, 5981-5994.	3.0	29
62	High Frequency Ultrasonic Imaging. Journal of Medical Ultrasound, 2009, 17, 25-30.	0.4	126
63	A High-Frame Rate Duplex Ultrasound Biomicroscopy for Small Animal Imaging <i>In vivo</i> . IEEE Transactions on Biomedical Engineering, 2008, 55, 2039-2049.	4.2	47
64	High frequency ultrasonic characterization of human vocal fold tissue. Journal of the Acoustical Society of America, 2007, 122, 1827-1832.	1.1	37
65	Feasibility study of using high-frequency ultrasonic Nakagami imaging for characterizing the cataract lens <i>in vitro</i> . Physics in Medicine and Biology, 2007, 52, 6413-6425.	3.0	63
66	Evaluation of Lens Hardness in Cataract Surgery using High-Frequency Ultrasonic Parameters in Vitro. Ultrasound in Medicine and Biology, 2007, 33, 1609-1616.	1.5	32
67	Determining the Acoustic Properties of the Lens Using A High-Frequency Ultrasonic Needle Transducer. Ultrasound in Medicine and Biology, 2007, 33, 1971-1977.	1.5	37
68	Radiation forces exerted on arbitrarily located sphere by acoustic tweezer. Journal of the Acoustical Society of America, 2006, 120, 1084-1094.	1.1	90
69	A theoretical study of the feasibility of acoustical tweezers: Ray acoustics approach. Journal of the Acoustical Society of America, 2005, 117, 3273-3280.	1.1	112
70	Diagnostic Ultrasound. , 0, , .		73