

Russell S Witte

List of Publications by Year in descending order

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Version: 2024-02-01

74
papers

1,355
citations

430874

18
h-index

377865

34
g-index

76
all docs

76
docs citations

76
times ranked

1117
citing authors

#	ARTICLE	IF	CITATIONS
1	Shear-Wave Elastography: Basic Physics and Musculoskeletal Applications. <i>Radiographics</i> , 2017, 37, 855-870.	3.3	378
2	Ultrasound Current Source Density Imaging. <i>IEEE Transactions on Biomedical Engineering</i> , 2008, 55, 1840-1848.	4.2	83
3	Computational Feasibility Study of Contrast-Enhanced Thermoacoustic Imaging for Breast Cancer Detection Using Realistic Numerical Breast Phantoms. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015, 63, 1489-1501.	4.6	62
4	Intracellular delivery and ultrasonic activation of folate receptor-targeted phase-change contrast agents in breast cancer cells in vitro. <i>Journal of Controlled Release</i> , 2016, 243, 69-77.	9.9	60
5	Spectroscopic thermoacoustic imaging of water and fat composition. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	55
6	Imaging current flow in lobster nerve cord using the acoustoelectric effect. <i>Applied Physics Letters</i> , 2007, 90, 163902.	3.3	54
7	Cardiac activation mapping using ultrasound current source density imaging (UCSDI). <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009, 56, 565-574.	3.0	49
8	Measuring the acoustoelectric interaction constant using ultrasound current source density imaging. <i>Physics in Medicine and Biology</i> , 2012, 57, 5929-5941.	3.0	42
9	Microwave-Induced Thermoacoustic Communications. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2017, 65, 3369-3378.	4.6	40
10	Impact of Microwave Pulses on Thermoacoustic Imaging Applications. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2012, 11, 1634-1637.	4.0	36
11	Thermoacoustic and photoacoustic characterizations of few-layer graphene by pulsed excitations. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	36
12	Artifacts in Musculoskeletal Ultrasonography. <i>Seminars in Musculoskeletal Radiology</i> , 2014, 18, 003-011.	0.7	31
13	Ultrasound Current Source Density Imaging of the Cardiac Activation Wave Using a Clinical Cardiac Catheter. <i>IEEE Transactions on Biomedical Engineering</i> , 2015, 62, 241-247.	4.2	30
14	Optimizing frequency and pulse shape for ultrasound current source density imaging. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2012, 59, 2149-55.	3.0	25
15	Microwave-Induced Thermoacoustic Imaging for Embedded Explosives Detection in High-Water Content Medium. <i>IEEE Transactions on Antennas and Propagation</i> , 2019, 67, 4803-4810.	5.1	25
16	An electrically coupled tissue-engineered cardiomyocyte scaffold improves cardiac function in rats with chronic heart failure. <i>Journal of Heart and Lung Transplantation</i> , 2014, 33, 438-445.	0.6	22
17	High resolution transcranial acoustoelectric imaging of current densities from a directional deep brain stimulator. <i>Journal of Neural Engineering</i> , 2020, 17, 016074.	3.5	21
18	A pilot study of ultrasound-guided electronic brachytherapy for skin cancer. <i>Journal of Contemporary Brachytherapy</i> , 2015, 5, 374-380.	0.9	19

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19	Acoustoelectric imaging of deep dipoles in a human head phantom for guiding treatment of epilepsy. <i>Journal of Neural Engineering</i> , 2020, 17, 056040.	3.5	18
20	Selective Mapping of Deep Brain Stimulation Lead Currents Using Acoustoelectric Imaging. <i>Ultrasound in Medicine and Biology</i> , 2018, 44, 2345-2357.	1.5	16
21	Simulation-based validation for four-dimensional multi-channel ultrasound current source density imaging. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014, 61, 420-427.	3.0	15
22	Performance of a transcranial US array designed for 4D acoustoelectric brain imaging in humans. , 2017, , .		13
23	Frontiers of cancer imaging and guided therapy using ultrasound, light, and microwaves. <i>Clinical and Experimental Metastasis</i> , 2018, 35, 413-418.	3.3	13
24	Time-efficient contrast-enhanced thermoacoustic imaging modality for 3-D breast cancer detection using compressive sensing. , 2014, , .		12
25	Ultrasound Elasticity Imaging for Determining the Mechanical Properties of Human Posterior Tibial Tendon: A Cadaveric Study. <i>IEEE Transactions on Biomedical Engineering</i> , 2015, 62, 1179-1184.	4.2	12
26	Emerging photoacoustic and thermoacoustic imaging technologies for detecting primary and metastatic cancer and guiding therapy. <i>Clinical and Experimental Metastasis</i> , 2022, 39, 213-217.	3.3	12
27	In vivo acoustoelectric imaging for high-resolution visualization of cardiac electric spatiotemporal dynamics. <i>Applied Optics</i> , 2020, 59, 11292.	1.8	11
28	4D acoustoelectric imaging of current sources in a human head phantom. , 2016, , .		10
29	Performance improvement for thermoacoustic imaging using compressive sensing. , 2014, , .		8
30	Broadband Spectroscopic Thermoacoustic Characterization of Single-Walled Carbon Nanotubes. <i>Journal of Spectroscopy</i> , 2015, 2015, 1-7.	1.3	8
31	Advances in Lower Extremity Ultrasound. <i>Current Radiology Reports</i> , 2015, 3, 1.	1.4	8
32	Tissue Acoustoelectric Effect Modeling From Solid Mechanics Theory. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2017, 64, 1583-1590.	3.0	8
33	Real-Time Volumetric Thermoacoustic Imaging and Thermometry Using a 1.5-D Ultrasound Array. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2021, 68, 1234-1244.	3.0	8
34	Complementary Detection of Multiple Electrical Sources in Tissue Using Acoustoelectric Effects. <i>Ultrasound in Medicine and Biology</i> , 2016, 42, 2323-2333.	1.5	7
35	Artifacts at Musculoskeletal US: Resident and Fellow Education Feature. <i>Radiographics</i> , 2016, 36, 479-480.	3.3	7
36	Noninvasive Acoustoelectric Imaging of Resistivity Distribution Based on Lead Field Theory. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2019, 68, 4779-4786.	4.7	7

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37	Thermoacoustic imaging and spectroscopy for enhanced breast cancer detection. , 2011, , .		6
38	Mapping the ECG in the live rabbit heart using Ultrasound current source density imaging with coded excitation. , 2012, 2012, 910-913.		6
39	A hybrid microwave / acoustic communication scheme — Thermoacoustic communication. , 2013, , .		6
40	Tracking delivery of a drug surrogate in the porcine heart using photoacoustic imaging and spectroscopy. Journal of Biomedical Optics, 2017, 22, 041016.	2.6	6
41	Real-time 3D thermoacoustic imaging and thermometry using a self-calibration technique. Applied Optics, 2020, 59, G255.	1.8	5
42	Ultrasound Current Source Density Imaging of a time-varying current field in a multielectrode nerve chamber. , 2009, , .		4
43	Computational study of thermoacoustic imaging for breast cancer detection using a realistic breast model. , 2013, , .		4
44	Modeling of non-contact thermoacoustic imaging. , 2015, , .		4
45	An Instrumental Electrode Configuration for 3-D Ultrasound Modulated Electrical Impedance Tomography. IEEE Sensors Journal, 2017, 17, 8206-8214.	4.7	4
46	Development of a Mobile Platform for Acoustoelectric Brain Imaging in Rats. , 2018, , .		4
47	Detecting Deep Brain Stimulation Currents with High Resolution Transcranial Acoustoelectric Imaging. , 2019, , .		4
48	4D Transcranial Acoustoelectric Imaging of Current Densities in a Human Head Phantom. , 2019, , .		4
49	4D Cardiac Activation Wave Mapping in In Vivo Swine Model using Acoustoelectric Imaging. , 2019, , .		4
50	Real-Time Thermoacoustic Imaging and Thermometry during Focused Microwave Heating in Multilayer Breast Phantom. , 2019, , .		4
51	Multichannel ultrasound current source density imaging of a 3-D dipole field. , 2010, , .		3
52	Microwave induced thermal acoustic imaging modeling for potential breast cancer detection. , 2011, , .		3
53	Comparison of carbon nanotubes and microbubbles as contrast agents for thermoacoustic imaging by computational studies. , 2014, , .		3
54	Thermoacoustic Image-Guided Focused Microwave Therapy for Enhanced Breast Cancer Treatment. , 2019, , .		3

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55	Microwave-induced thermoacoustic imaging for embedded explosives detection. , 2014, , .		2
56	Fabrication of a realistic breast phantom based on 3D printing technology for thermoacoustic imaging application in breast cancer detection. , 2015, , .		2
57	Improving sensitivity in acoustoelectric imaging with coded excitation and optimized inverse filter. , 2017, , .		2
58	Performance of a transcranial ultrasound array designed for 4D acoustoelectric brain imaging in humans. , 2017, , .		2
59	Correcting Transcranial Ultrasound Aberrations Through Acoustoelectric Derived Time Reversal Operations. , 2020, , .		2
60	Introduction to novel developments in radio-imaging and radiotherapy. Clinical and Experimental Metastasis, 2022, 39, 219-224.	3.3	2
61	Optimizing frequency and pulse shape for ultrasound current source density imaging. , 2011, , .		1
62	Ultrasound Current Source Density Imaging using a clinical intracardiac catheter. , 2011, , .		1
63	Real-time thermoacoustic imaging and thermometry in bovine udder tissue comparing two calibration methods. , 2020, , .		1
64	4D Reconstruction and Identification of Carotid Artery Stenosis Utilizing a Novel Pulsatile Ultrasound Phantom. Current Protocols, 2021, 1, e264.	2.9	1
65	Simultaneous detection of multiple contrast agents with photoacoustic spectroscopy. , 2012, , .		0
66	Minimizing strain error for in vivo ultra-sound elasticity imaging of human tendon. , 2016, , .		0
67	Acoustoelectric imaging of time-varying current produced by a clinical deep brain stimulator. , 2017, , .		0
68	Design considerations and performance of a variable gain, variable bandwidth signal processing circuit for acoustoelectric imaging. , 2017, , .		0
69	Design considerations and performance of a variable gain, variable bandwidth signal processing circuit for acoustoelectric imaging. , 2017, , .		0
70	Notice of Removal: Coded excitation with optimized inverse filter for improving sensitivity in acoustoelectric imaging. , 2017, , .		0
71	Acoustoelectric imaging of time-varying current produced by a clinical deep brain stimulator. , 2017, , .		0
72	Current Density Mapping of the In Vivo Swine Heart using Multichannel Acoustoelectric Cardiac Imaging. , 2021, , .		0

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73	Neuronavigation with Skull Segmentation and Acoustic Modeling for Guiding Transcranial Acoustoelectric Brain Imaging. , 2021, , .		0
74	Real-Time Trimodal Ultrasound, Photoacoustic, and Thermoacoustic Imaging for Biomedical Applications. , 2021, , .		0