Ekaterina S Prikhozhdenko

List of Publications by Year
in descending order

94 papers	896 citations	623574 14 h-index	526166 27 g-index
95 all docs	95 docs citations	95 times ranked	799 citing authors

#	Article	IF	Citations
1	Piezoelectric Micromachined Ultrasonic Transducer for Arterial Wall Dynamics Monitoring. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 291-298.	1.7	5
2	Measurement of local orientation of cardiomyocyte aggregates in human left ventricle free wall samples using X-ray phase-contrast microtomography. Medical Image Analysis, 2022, 75, 102269.	7.0	4
3	SIMUS: An open-source simulator for medical ultrasound imaging. Part II: Comparison with four simulators. Computer Methods and Programs in Biomedicine, 2022, 220, 106774.	2.6	14
4	So you think you can DAS? A viewpoint on delay-and-sum beamforming. Ultrasonics, 2021, 111, 106309.	2.1	124
5	Use of the Cross-Spectral Density Matrix for Enhanced Passive Ultrasound Imaging of Cavitation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 910-925.	1.7	6
6	Sparse Convolutional Beamforming for 3-D Ultrafast Ultrasound Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 2444-2459.	1.7	8
7	A Methodology for Accessing the Local Arrangement of the Sheetlets that Make up the Extracellular Heart Tissue. Lecture Notes in Computer Science, 2021, , 159-167.	1.0	2
8	In Vitro and In Vivo Multispectral Photoacoustic Imaging for the Evaluation of Chromophore Concentration. Sensors, 2021, 21, 3366.	2.1	6
9	4D ultrafast blood flow imaging comparison: vector Doppler, transverse oscillation and speckle tracking. , 2021, , .		0
10	Double-stage least-squares regularisation for 3D velocity estimation: a simulation study. , 2021, , .		1
11	Sparse hand-held probe for optoacoustic ultrasound volumetric imaging: an experimental proof-of-concept study. Optics Letters, 2020, 45, 885.	1.7	2
12	Block-Wise Ultrasound Image Deconvolution from Fundamental and Harmonic Images. , 2020, , .		2
13	Using Sparse Array for 3D Passive Cavitation Imaging. , 2020, , .		2
14	Liposomes Containing Nickelâ€“Bis(dithiolene) Complexes for Photothermal Theranostics. Langmuir, 2019, 35, 15121-15130.	1.6	9
15	3D+t Vector Flow Imaging with Transverse Oscillations and Doppler Estimator. , 2019, , .		6
16	Experimental validation of a novel technique for ultrasound imaging of cardiac fiber orientation. , 2019, , .		0
17	Full 3D anisotropic estimation of tissue in ultrasound imaging. , 2019, , .		1
18	Investigation on 3D high frame rate imaging with motion compensation (MoCo). , 2019, , .		5

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19	Investigating the 3D Local Myocytes Arrangement in the Human LV Mid-Wall with the Transverse Angle. Lecture Notes in Computer Science, 2019, , 208-216.	1.0	7
20	Quantification of Multispectral Photoacoustic Images: Unsupervised Unmixing Methods Comparison. , 2018, , .		0
21	An Open Real-Time Photoacoustic Imaging Scanner. , 2018, , .		0
22	Advanced Beamforming Techniques for Passive Imaging of Stable and Inertial Cavitation. , 2018, , .		4
23	Spatial and spectral regularization to discriminate tissues using multispectral photoacoustic imaging. Eurasip Journal on Advances in Signal Processing, 2018, 2018, .	1.0	2
24	Influence of Beamforming Methods on Velocity Estimation: In Vitro Experiments. , 2018, , .		4
25	Weighting the Passive Acoustic Mapping Technique With the Phase Coherence Factor for Passive Ultrasound Imaging of Ultrasound-Induced Cavitation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 2301-2310.	1.7	16
26	Fast Volumetric Ultrasound B-Mode and Doppler Imaging with a New High-Channels Density Platform for Advanced 4D Cardiac Imaging/Therapy. Applied Sciences (Switzerland), 2018, 8, 200.	1.3	54
27	A Nonlinear Beamformer Based on p-th Root Compressionâ€"Application to Plane Wave Ultrasound Imaging. Applied Sciences (Switzerland), 2018, 8, 599.	1.3	44
28	Experimental Implementation of a Pulse Compression Technique Using Coherent Plane-Wave Compounding. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1025-1036.	1.7	9
29	Experimental 3-D Ultrasound Imaging with 2-D Sparse Arrays using Focused and Diverging Waves. Scientific Reports, 2018, 8, 9108.	1.6	68
30	Thermal carbonization in nanoscale reactors: controlled formation of carbon nanodots inside porous CaCO3 microparticles. Scientific Reports, 2018, 8, 9394.	1.6	10
31	Extraction of the 3D local orientation of myocytes in human cardiac tissue using X-ray phase-contrast micro-tomography and multi-scale analysis. Medical Image Analysis, 2017, 38, 117-132.	7.0	29
32	Fast Nonlinear Ultrasound Propagation Simulation Using a Slowly Varying Envelope Approximation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1015-1022.	1.7	1
33	Quantitative comparison of PZT and CMUT probes for photoacoustic imaging: Experimental validation. Photoacoustics, 2017, 8, 48-58.	4.4	46
34	Spectrophotometry and Photoacoustic Imaging: A Comparative Study. Irbm, 2017, 38, 352-356.	3.7	2
35	Local Orientation Imaging for Tissue Structure Using Ultrasound Imaging. Irbm, 2017, 38, 298-303.	3.7	1
36	A new high channels density ultrasound platform for advanced 4D cardiac imaging. , 2017, , .		5

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37	Ultrafast ultrasound imaging using a resolution and bandwidth enhancement technique. , 2017, , .		1
38	A new high channels density ultrasound platform for advanced 4D cardiac imaging. , 2017, , .		2
39	Notice of Removal: Fourier-based ultrafast ultrasound imaging based on in-phase quadrature (IQ) data. , 2017, , .		0
40	Ultrasound bandwidth enhancement through pulse compression using a CMUT probe. , 2017, , .		3
41	Notice of Removal: High-volume-rate 3-D ultrasound imaging based on motion compensation: A feasibility study. , 2017, , .		1
42	A computationally efficient non-linear beamformer based on pth root signal compression for enhanced ultrasound B-mode imaging. , 2017, , .		0
43	Notice of Removal: Fourier-based 3D ultrafast ultrasound imaging with diverging waves: In vitro experiment validation. , 2017, , .		0
44	Ultrasound bandwidth enhancement through pulse compression using a CMUT probe. , 2017, , .		0
45	Validation of optimal 2D sparse arrays in focused mode: Phantom experiments. , 2017, , .		3
46	3D ultrasound imaging of tissue anisotropy using spatial coherence: Comparison between plane waves and diverging waves. , 2017, , .		1
47	3D diverging waves with 2D sparse arrays: A feasibility study. , 2017, , .		2
48	High-frame-rate 3-D echocardiography based on motion compensation: An in vitro evaluation. , 2017, , .		6
49	Validation of optimal 2D sparse arrays in focused mode: Phantom experiments. , 2017, , .		5
50	3D ultrasound imaging of tissue anisotropy using spatial coherence: Comparison between plane and diverging waves. , 2017, , .		0
51	A computationally efficient nonlinear beamformer based on p-th root signal compression for enhanced ultrasound B-mode imaging. , 2017, , .		4
52	3D diverging waves with 2D sparse arrays: A feasibility study. , 2017, , .		2
53	Ultrafast ultrasound imaging using a resolution and bandwidth enhancement technique. , 2017, , .		2
54	Notice of Removal: 3D passive imaging of ultrasound cavitation using a 2D array. , 2017, , .		0

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55	Hybrid Strategy to Simulate 3-D Nonlinear Radio-Frequency Ultrasound Using a Variant Spatial PSF. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 1390-1398.	1.7	6
56	Passive cavitation imaging using different advanced beamforming methods. , 2016, , .		2
57	Optimization of resolution enhancement compression technique with plane wave imaging. , 2016, , .		4
58	A Fourier-based formalism for 3D ultrafast imaging with diverging waves. , 2016, , .		0
59	Spatial and spectral regularization for multispectral photoacoustic image clustering. , 2016, , .		2
60	A Sparse Reconstruction Framework for Fourier-Based Plane-Wave Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 2092-2106.	1.7	32
61	Adaptive minimum variance coupled with sign and phase coherence factors in IQ domain for plane wave beamforming. , 2016, , .		4
62	Extension of Fourier-Based Techniques for Ultrafast Imaging in Ultrasound With Diverging Waves. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 2125-2137.	1.7	35
63	Statistical analysis of transmural laminar microarchitecture of the human left ventricle. , 2016, , .		5
64	Volumetric pulse echo and optoacoustic imaging by elaborating a weighted synthetic aperture technique. , 2015, , .		5
65	Nonlinearity parameter B/A of biological tissue ultrasound imaging in echo mode. AIP Conference Proceedings, 2015, , .	0.3	1
66	Simulation of nonlinear ultrasound wave propagation in Fourier domain. AIP Conference Proceedings, 2015, , .	0.3	0
67	Extension of Ultrasound Fourier Slice Imaging theory to sectorial acquisition. , 2015, , .		4
68	Dual Frequency Band Annular Probe for Volumetric Pulse-echo Optoacoustic Imaging. Physics Procedia, 2015, 70, 1104-1108.	1.2	4
69	Evaluation of a frequency-domain ultrasonic imaging attenuation compensation technique. , 2015, 2015, 1560-3.		3
70	Generalization of Multipulse Transmission Techniques for Ultrasound Imaging. Ultrasonic Imaging, 2015, 37, 294-311.	1.4	8
71	Very High-Resolution Imaging of Post-Mortem Human Cardiac Tissue Using X-Ray Phase Contrast Tomography. Lecture Notes in Computer Science, 2015, , 172-179.	1.0	10
72	Ultrasound Fourier slice imaging: a novel approach for ultrafast imaging technique. , 2014, , .		14

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73	Neuromuscular fiber segmentation through particle filtering and discrete optimization. Proceedings of SPIE, 2014, , .	0.8	0
74	A nonlinear ultrasound propagation simulator using the Slowly Varying Envelope Approximation. , 2014, , .		2
75	High frame rate compounding for nonlinear B/A parameter ultrasound imaging in echo mode — simulation results. , 2014, , .		4
76	Enhancement of photoacoustic imaging quality by using CMUT technology: Experimental study. , 2014, , .		7
77	Fast simulation of realistic pseudo-acoustic nonlinear radio-frequency ultrasound images. , 2014, , .		2
78	Speckle decorrelation of motion in Ultrasound Fourier images. , 2014, , .		0
79	Ultrasound contrast imaging: influence of scatterer motion in multi-pulse techniques. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 2065-2078.	1.7	11
80	Multi-resolution transverse oscillation in ultrasound imaging for motion estimation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2013, 60, 1333-1342.	1.7	17
81	CREANUIS: A Non-linear Radiofrequency Ultrasound Image Simulator. Ultrasound in Medicine and Biology, 2013, 39, 1915-1924.	0.7	48
82	An alternative method to classical beamforming for transverse oscillation images: Application to elastography. , 2013, , .		11
83	High Resolution Extraction of Local Human Cardiac Fibre Orientations. Lecture Notes in Computer Science, 2013, , 150-157.	1.0	9
84	Multi resolution transverse oscillations for motion estimation in ultrasound images. , 2012, , .		1
85	Fast and accurate nonlinear pressure field simulation: A finite-difference scheme into the Fourier domain. , 2012, , .		2
86	Double pulse inversion imaging for ultrasound contrast imaging. , 2012, , .		0
87	Influences of bubble motion to second-harmonic inversion imaging. , 2012, , .		2
88	Resolution improvement in Thomson's multitaper approach using the pulse inversion technique. , 2012, , .		0
89	4D simulation of nonlinear pressure field propagation on GPU with the angular spectrum method. , 2011, , .		1
90	Extensions of nonlinear B/A parameter imaging methods for echo mode. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 1232-1244.	1.7	30

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91	Fundamental and second-harmonic ultrasound field computation of inhomogeneous nonlinear medium with a generalized angular spectrum method. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 1366-1376.	1.7	48
92	Simulation of ultrasound nonlinear propagation on GPU using a generalized angular spectrum method. Eurasip Journal on Image and Video Processing, 2011, 2011, .	1.7	20
93	Experimental implementation of the second harmonic inversion imaging on an open ultrasonic scanner. , 2011, , .		1
94	Nonlinear parameter imaging to characterize HIFU ablation: Preliminary in vitro results in porcine liver. , 2011, , .		2