Boris Chayer

List of Publications by Year
in descending order

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43 papers	767 citations	567144 15 h-index	526166 27 g-index
43 all docs	43 docs citations	43 times ranked	874 citing authors

#	Article	IF	Citations
1	Projected Valve Area at Normal Flow Rate Improves the Assessment of Stenosis Severity in Patients With Low-Flow, Low-Gradient Aortic Stenosis. Circulation, 2006, 113, 711-721.	1.6	237
2	Estimation of aortic valve effective orifice area by Doppler echocardiography: effects of valve inflow shape and flow rate. Journal of the American Society of Echocardiography, 2004, 17, 756-765.	1.2	69
3	Noninvasive Vascular Elastography With Plane Strain Incompressibility Assumption Using Ultrafast Coherent Compound Plane Wave Imaging. IEEE Transactions on Medical Imaging, 2015, 34, 2618-2631.	5.4	60
4	The Added Value of Statistical Modeling of Backscatter Properties in the Management of Breast Lesions at US. Radiology, 2015, 275, 666-674.	3.6	39
5	Performance evaluation of a medical robotic 3D-ultrasound imaging system. Medical Image Analysis, 2008, 12, 275-290.	7.0	38
6	Development of a Photoacoustic, Ultrasound and Fluorescence Imaging Catheter for the Study of Atherosclerotic Plaque. IEEE Transactions on Biomedical Circuits and Systems, 2014, 8, 696-703.	2.7	36
7	Ultrasonic parametric imaging of erythrocyte aggregation using the structure factor size estimator. Biorheology, 2009, 46, 343-363.	1.2	31
8	Quantitative ultrasound, elastography, and machine learning for assessment of steatosis, inflammation, and fibrosis in chronic liver disease. PLoS ONE, 2022, 17, e0262291.	1.1	19
9	A multimodality vascular imaging phantom of an abdominal aortic aneurysm with a visible thrombus. Medical Physics, 2013, 40, 063701.	1.6	18
10	Noninvasive Vascular Modulography Method for Imaging the Local Elasticity of Atherosclerotic Plaques: Simulation and In Vitro Vessel Phantom Study. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 1805-1817.	1.7	18
11	Estimation of polydispersity in aggregating red blood cells by quantitative ultrasound backscatter analysis. Journal of the Acoustical Society of America, 2018, 143, 2207-2216.	0.5	18
12	Multimodality vascular imaging phantoms: A new material for the fabrication of realistic 3D vessel geometries. Medical Physics, 2009, 36, 3758-3763.	1.6	17
13	Atherosclerotic carotid bifurcation phantoms with stenotic soft inclusions for ultrasound flow and vessel wall elastography imaging. Physics in Medicine and Biology, 2019, 64, 095025.	1.6	17
14	Added Value of Quantitative Ultrasound and Machine Learning in BI-RADS 4â€“5 Assessment of Solid Breast Lesions. Ultrasound in Medicine and Biology, 2020, 46, 436-444.	0.7	17
15	Experimental Application of Ultrafast Imaging to Spectral Tissue Characterization. Ultrasound in Medicine and Biology, 2015, 41, 2506-2519.	0.7	16
16	Acoustic radiation force induced resonance elastography of coagulating blood: theoretical viscoelasticity modeling andex vivoexperimentation. Physics in Medicine and Biology, 2018, 63, 065018.	1.6	16
17	Velocity measurement accuracy in optical microhemodynamics: experiment and simulation. Physiological Measurement, 2012, 33, 1585-1602.	1.2	14
18	Ultrasound Monitoring of RBC Aggregation as a Real-Time Marker of the Inflammatory Response in a Cardiopulmonary Bypass Swine Model*. Critical Care Medicine, 2013, 41, e171-e178.	0.4	11

#	Article	IF	Citations
19	Pilot clinical study of quantitative ultrasound spectroscopy measurements of erythrocyte aggregation within superficial veins. Clinical Hemorheology and Microcirculation, 2020, 74, 109-126.	0.9	11
20	Parameterized Strain Estimation for Vascular Ultrasound Elastography With Sparse Representation. IEEE Transactions on Medical Imaging, 2020, 39, 3788-3800.	5.4	11
21	Investigation of out-of-plane motion artifacts in 2D noninvasive vascular ultrasound elastography. Physics in Medicine and Biology, 2018, 63, 245003.	1.6	10
22	Shear Wave Elastography and Quantitative Ultrasound as Biomarkers to Characterize Deep Vein Thrombosis In Vivo. Journal of Ultrasound in Medicine, 2022, 41, 1807-1816.	0.8	8
23	Protocol for Robust InÂVivo Measurements of Erythrocyte Aggregation Using Ultrasound Spectroscopy. Ultrasound in Medicine and Biology, 2017, 43, 2871-2881.	0.7	6
24	Accuracy of speckle tracking in the context of stress echocardiography in short axis view: An in vitro validation study. PLoS ONE, 2018, 13, e0193805.	1.1	6
25	Machine learning based on quantitative ultrasound for assessment of chronic liver disease. , 2020, , .		4
26	Segmentation of blood layers with particle image velocimetry (PIV) for reproducible in vivo characterization of erythrocyte aggregation. , 2016, , .		3
27	Influence of erythrocyte aggregation on radial migration of platelet-sized spherical particles in shear flow. Journal of Biomechanics, 2017, 61, 26-33.	0.9	3
28	Effect of depth of correlation on cross-correlation blood flow measurements in glass microchannels. , 2008, , .		2
29	Ultrafast myocardial elastography using coherent compounding of diverging waves during simulated stress tests: An in vitro study. , 2017, , .		2
30	A global strain estimation algorithm for non-invasive vascular ultrasound elastography. , 2019, , .		2
31	Anthropomorphic and biomechanical mockup for abdominal aortic aneurysm. Medical Engineering and Physics, 2020, 77, 60-68.	0.8	2
32	Impact of Applying a Skin Compression With the Ultrasound Probe on Carotid Artery Strain Elastography. Journal of Ultrasound in Medicine, 2022, 41, 685-697.	0.8	2
33	Experimental validation of plane wave imaging using k-space beamforming for spectral characterization of isotropic media. , 2014, , .		1
34	Effective Medium Theory combined with a polydisperse Structure Factor Model for characterizing red blood cell aggregation. , 2016, , .		1
35	Stiffness Evaluation of Aortic Aneurysms Using an Ultrafast Principal Strain Estimator: In Vitro Validation. , 2018, , .		1
36	Deformability of ascending thoracic aorta aneurysms assessed using ultrafast ultrasound and a principal strain estimator: In vitro evaluation and in vivo feasibility. Medical Physics, 2022, , .	1.6	1

#	Article	IF	Citations
37	In-vivo and real-time ultrasonic monitoring of red blood cell aggregation with the structure factor size and attenuation estimator during and after cardiopulmonary bypass surgery in swine. , 2010, , .		0
38	Nyquist velocity extension in ultrafast color Doppler. , 2014, , .		0
39	Ultrafast myocardial elastography using coherent compounding of diverging waves during simulated exercise. , 2017, , .		0
40	Atherosclerotic carotid bifurcation phantoms with a stenotic soft inclusion for flow-structure ultrasound imaging analysis. , 2019, , .		0
41	Ultrafast Quantitative Ultrasound and Shear Wave Elastography Imaging of In Vivo Duck Fatty Livers. , 2019, , .		0
42	BI-RADS assessment of solid breast lesions based on quantitative ultrasound and machine learning. , 2019, , .		0
43	On the influence of external force induced by the ultrasound probe on internal carotid artery elastography features. , 2020, , .		0