

# Emad S Ebbini

## List of Publications by Year in descending order

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107  
papers

1,666  
citations

394286

19  
h-index

330025

37  
g-index

110  
all docs

110  
docs citations

110  
times ranked

1499  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement of tumor thermal therapy using gold nanoparticle-assisted tumor necrosis factor- $\alpha$ delivery. <i>Molecular Cancer Therapeutics</i> , 2006, 5, 1014-1020.	1.9	249
2	Real-Time 2-D Temperature Imaging Using Ultrasound. <i>IEEE Transactions on Biomedical Engineering</i> , 2010, 57, 12-16.	2.5	150
3	Ultrasound-guided therapeutic focused ultrasound: Current status and future directions. <i>International Journal of Hyperthermia</i> , 2015, 31, 77-89.	1.1	115
4	Noninvasive Estimation of Tissue Temperature Via High-Resolution Spectral Analysis Techniques. <i>IEEE Transactions on Biomedical Engineering</i> , 2005, 52, 221-228.	2.5	101
5	New piezoelectric transducers for therapeutic ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2000, 26, 153-159.	0.7	93
6	Dual-Mode Ultrasound Phased Arrays for Image-Guided Surgery. <i>Ultrasonic Imaging</i> , 2006, 28, 65-82.	1.4	93
7	Reversible neuroinhibition by focused ultrasound is mediated by a thermal mechanism. <i>Brain Stimulation</i> , 2019, 12, 1439-1447.	0.7	69
8	Phase-coupled two-dimensional speckle tracking algorithm. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2006, 53, 972-990.	1.7	64
9	Post-beamforming second-order Volterra filter for pulse-echo ultrasonic imaging. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2003, 50, 987-1001.	1.7	55
10	Nanotherapeutics for enhancing thermal therapy of cancer. <i>International Journal of Hyperthermia</i> , 2007, 23, 501-511.	1.1	54
11	Real-Time Implementation of a Dual-Mode Ultrasound Array System: In Vivo Results. <i>IEEE Transactions on Biomedical Engineering</i> , 2013, 60, 2751-2759.	2.5	51
12	Viscoelastic property measurement in thin tissue constructs using ultrasound. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2008, 55, 368-383.	1.7	42
13	Adaptive Transthoracic Refocusing of Dual-Mode Ultrasound Arrays. <i>IEEE Transactions on Biomedical Engineering</i> , 2010, 57, 93-102.	2.5	38
14	Realtime Control of Multiple-focus Phased Array Heating Patterns Based on Noninvasive Ultrasound Thermography. <i>IEEE Transactions on Biomedical Engineering</i> , 2012, 59, 95-105.	2.5	36
15	Real-Time Ultrasound Thermography and Thermometry [Life Sciences]. <i>IEEE Signal Processing Magazine</i> , 2018, 35, 166-174.	4.6	36
16	In Vivo application and localization of transcranial focused ultrasound using dual-mode ultrasound arrays. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2015, 62, 2031-2042.	1.7	34
17	<i>In Vivo</i> Ultrasound Thermography in Presence of Temperature Heterogeneity and Natural Motions. <i>IEEE Transactions on Biomedical Engineering</i> , 2015, 62, 450-457.	2.5	28
18	Anatomical-based model for simulation of HIFU-induced lesions in atherosclerotic plaques. <i>International Journal of Hyperthermia</i> , 2015, 31, 433-442.	1.1	26

#	ARTICLE	IF	CITATIONS
19	<title>Motion compensation algorithm for noninvasive two-dimensional temperature estimation using diagnostic pulse-echo ultrasound</title>. , 1998, , .		25
20	Feasibility of Targeting Atherosclerotic Plaques by High-Intensityâ€‘focused Ultrasound: An In Vivo Study. Journal of Vascular and Interventional Radiology, 2013, 24, 1880-1887.e2.	0.2	23
21	Imaging with concave large-aperture therapeutic ultrasound arrays using conventional synthetic-aperture beamforming. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 1705-1718.	1.7	18
22	Viscoelastic characterization of thin tissues using acoustic radiation force and model-based inversion. Physics in Medicine and Biology, 2009, 54, 4089-4112.	1.6	18
23	Nonlinear Imaging of Microbubble Contrast Agent Using the Volterra Filter: &lt;italic>In Vivo&lt;/italic> Results. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 2069-2081.	1.7	15
24	Ultrasonic focusing through inhomogeneous media by application of the inverse scattering problem. Journal of the Acoustical Society of America, 1998, 104, 313-325.	0.5	14
25	The Optimization of Transcostal Phased Array Refocusing Using the Semidefinite Relaxation Method. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 318-328.	1.7	13
26	Two-dimensional speckle tracking using parabolic polynomial expansion with Riesz transform. , 2017, , .		12
27	<title>Image-guided noninvasive surgery with ultrasound phased arrays</title>. , 1998, , .		9
28	Guest Editorial to the Special Letters Issue on Therapeutic Ultrasound: Trends at the Leading-Edge. IEEE Transactions on Biomedical Engineering, 2010, 57, 5-6.	2.5	8
29	Imaging vascular mechanics using ultrasound: Phantom and in vivo results. , 2010, , .		8
30	High-intensity focused ultrasound for potential treatment of polycystic ovary syndrome: toward a noninvasive surgery. Fertility and Sterility, 2014, 101, 545-551.e2.	0.5	8
31	<title>Combined ultrasound image guidance and therapy using a therapeutic phased array</title>. , 1998, , .		7
32	QUADRATIC B-MODE AND PULSE INVERSION IMAGING OF THERMALLY-INDUCED LESIONS IN VIVO. , 2007, , .		7
33	A post-beamforming 2-D pseudoinverse filter for coarsely sampled ultrasound arrays. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2009, 56, 1888-1902.	1.7	7
34	A thermal mechanism underlies tFUS neuromodulation. Brain Stimulation, 2020, 13, 327-328.	0.7	7
35	Real-time monitoring of thermal and mechanical response to sub-therapeutic HIFU beams in vivo. , 2010, , .		6
36	Adaptive motion compensation for in vivo ultrasound temperature estimation. , 2013, , .		6

#	ARTICLE	IF	CITATIONS
37	Two-dimensional speckle tracking using zero phase crossing with Riesz transform. Proceedings of Meetings on Acoustics, 2015, , .	0.3	6
38	Monitoring and guidance of minimally-invasive thermal therapy using diagnostic ultrasound. , 2009, 2009, 4283, 4285-6.		5
39	Simultaneous imaging of tissue motion and flow velocity using 2D phase-coupled speckle tracking. , 2010, , .		5
40	Dynamic imaging of tumor perfusion using contrast enhanced ultrasound: In vivo results. , 2014, , .		5
41	Precision Targeted Ablation of Fine Neurovascular Structures In Vivo Using Dual-mode Ultrasound Arrays. Scientific Reports, 2020, 10, 9249.	1.6	5
42	Self-guided ultrasound phased arrays for noninvasive surgery. , 2001, , .		4
43	VISCOELASTIC TISSUE PROPERTY MEASUREMENT USING HIGH FREQUENCY ULTRASOUND. , 2007, , .		4
44	Dual-mode ultrasound arrays for image-guided targeting of atheromatous plaques. , 2012, , .		4
45	Robust detection and control of bubble activity during high intensity focused ultrasound ablation. , 2012, , .		4
46	Ultrasound thermography in vivo: A new model for calculation of temperature change in the presence of temperature heterogeneity. , 2013, , .		4
47	Design Principles for Peptideâ€Amphiphileâ€Induced Liposomal Receptorâ€Targeting with Intracellular Thermosensitivity. ChemNanoMat, 2016, 2, 42-48.	1.5	4
48	Image-based numerical modeling of HIFU-induced lesions. AIP Conference Proceedings, 2017, , .	0.3	4
49	Three-dimensional image guidance for transcranial focused ultrasound therapy. , 2017, , .		4
50	Ultrasound thermography: A new temperature reconstruction model and in vivo results. AIP Conference Proceedings, 2017, , .	0.3	4
51	Wideband Image-Based Transskull Refocusing Using Dual-Mode Ultrasound Arrays. , 2018, , .		4
52	Quadratic B-mode and pulse inversion imaging of perfusion defects in vivo. , 2007, , .		3
53	Real-time two-dimensional temperature imaging using ultrasound. , 2009, 2009, 1971-4.		3
54	Real-time 2D Imaging of Thermal and Mechanical Tissue Response to Focused Ultrasound. , 2010, , .		3

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55	Real-time monitoring of thermal and mechanical tissue response to modulated phased-array HIFU beams in vivo. , 2012, , .		3
56	Real-time implementation of a dual-mode ultrasound array system: In vivo results. , 2012, , .		3
57	Adaptive third-order Volterra filter for detection and tracking of nonlinear oscillations in ultrasound echo data. , 2013, , .		3
58	Adaptive lesion formation using dual mode ultrasound array system. AIP Conference Proceedings, 2017, , .	0.3	3
59	Characterization of Heterogeneous Perfusion in Contrast-Enhanced Ultrasound. , 2018, , .		3
60	Post-beamforming second-order Volterra filter for nonlinear pulse-echo imaging. , 2002, , .		2
61	Image-guided refocusing of dual-mode ultrasound arrays (DMUAs). , 2008, , .		2
62	Image-Based Refocusing of Dual-Mode Ultrasound Arrays (DMUAs) in the Presence of Strongly Scattering Objects. , 2009, , .		2
63	Close-loop lesion formation control using multiple-focus dual mode ultrasound array. , 2014, , .		2
64	In vivo transcranial imaging of blood perfusion in rat brain using contrast-enhanced ultrasound. , 2015, , .		2
65	Spatio-Spectral Ultrasound Characterization of Reflection and Transmission Through Bone With Temperature Dependence. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2022, 69, 1727-1737.	1.7	2
66	Safety and feasibility study of non-invasive robot-assisted high-intensity focused ultrasound therapy for the treatment of atherosclerotic plaques in the femoral artery: protocol for a pilot study. BMJ Open, 2022, 12, e058418.	0.8	2
67	Nonlinear imaging methods for characterization of HIFU-induced lesions. , 2003, , .		1
68	Quadratic B-mode (QB-Mode) Ultrasonic Imaging with Coded Transmit Waveforms. , 2005, 2005, 7417-20.		1
69	ENHANCED IMAGE RESOLUTION OF DUAL-MODE ULTRASOUND ARRAY USING CODED EXCITATION. , 2007, , .		1
70	2D filter design for the reduction of beamforming artifacts in coarsely-sampled imaging apertures. , 2008, , .		1
71	A 2D post-beamforming filter for contrast restoration in medical ultrasound: in vivo results. , 2009, 2009, 1945-8.		1
72	Simultaneous Real-time Monitoring of Thermal and Mechanical Tissue Responses to Pulsed HIFU Using Pulse-Echo Ultrasound. , 2009, , .		1

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73	Monitoring and Guidance of HIFU Beams with Dual-Mode Ultrasound Arrays. , 2009, 2009, 137-40.		1
74	Guest Editorial to the Special Issue on Therapeutic Ultrasound: Current Status and Future Directions. IEEE Transactions on Biomedical Engineering, 2010, 57, 57-60.	2.5	1
75	Optimal Transthoracic Targeting of Liver Tumors Using Dual-mode Ultrasound Arrays: A numerical and experimental study. , 2010, , .		1
76	Dereverberation of ultrasound echo data in vascular imaging applications. , 2011, , .		1
77	A two dimensional sub-sample estimator based on zero phase crossing in ultrasound. , 2014, , .		1
78	Transcranial focusing and HIFU beam localization with dual-mode ultrasound arrays. , 2014, , .		1
79	Ultrasound Dereverberation/Deconvolution Filtering Based on Gaussian Mixture Modeling. , 2019, , .		1
80	Data-Driven Quadratic Kernel Synthesis for Nonlinear Ultrasound Imaging. , 2021, , .		1
81	Ultrasonic techniques for assessment of temperature and thermal damage. , 2000, , .		0
82	<title>Optimal synthesis of coded wavefronts for ultrasonic pulse-echo imaging</title>. , 2001, , .		0
83	Two-dimensional Temperature Imaging Using Pulse-Echo Ultrasound. AIP Conference Proceedings, 2006, , .	0.3	0
84	On The Design of Dual Mode Arrays for Imaging and Therapy. AIP Conference Proceedings, 2006, , .	0.3	0
85	On The Design of Dual Mode Arrays for Imaging and Therapy. AIP Conference Proceedings, 2007, , .	0.3	0
86	Nonlinear post-beamforming filtering of pulse-echo ultrasound for contrast enhancement. , 2009, , .		0
87	A New Design Approach for Dual-Mode Ultrasound Arrays. , 2009, , .		0
88	Realtime control of multiple-focus phased array heating patterns based on noninvasive ultrasound thermography. , 2010, , .		0
89	Multiple-frequency phased array pattern synthesis for HIFU surgery. , 2011, , .		0
90	Enhanced ultrasound imaging resolution with 3D optical patch imagery. , 2011, , .		0

#	ARTICLE	IF	CITATIONS
91	Nonlinear modeling of pulsed and CW HIFU beams for dual-mode ultrasound arrays. , 2012, , .		0
92	Multiple-frequency phased array patterns for therapeutic ultrasound. , 2012, , .		0
93	Continuous monitoring of pulsed HIFU beams using dual-mode ultrasound array systems. , 2012, , .		0
94	A subsample estimator based on zero phase crossing in ultrasound. , 2012, , .		0
95	A model based approach to in vivo ultrasound temperature estimation. , 2014, , .		0
96	Contrast enhanced ultrasound imaging using adaptive third-order Volterra filter. , 2014, , .		0
97	Direct estimation of carotid artery wall shear strain parameters using autocorrelation of high frame rate ultrasound images. , 2014, , .		0
98	Digital beam forming in MRI. , 2014, , .		0
99	Non-invasive tissue parameter estimation with dual-mode ultrasound arrays. AIP Conference Proceedings, 2017, , .	0.3	0
100	An integrated ultrasound-guided high intensity focused ultrasound system for in-vivo experiment. AIP Conference Proceedings, 2017, , .	0.3	0
101	High resolution strain deformation measurement of vascular tissue with ultrasound array and local spatial autocorrelation. , 2017, , .		0
102	Non-invasive transcranial surgery with dual-mode ultrasound arrays. AIP Conference Proceedings, 2017, , .	0.3	0
103	Ultrasound imaging using transmit wavefront synthesis: Spatial and frequency diversity approach to compounding. , 2017, , .		0
104	Ultrasound imaging using transmit wavefront synthesis: Spatial and frequency diversity approach to compounding. , 2017, , .		0
105	Characterization of Image-based Refocusing for Transcranial Therapies. , 2019, , .		0
106	Image-guided Application and Monitoring of Transcranial Focused Ultrasound in Realistic Human Head Phantom. , 2019, , .		0
107	Band Selective Volterra Filter for Nonlinear Ultrasound Imaging. , 2022, , .		0