Abbas Samani

List of Publications by Year
in descending order

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66 papers	2,271 citations	471061 17 h-index	214527 47 g-index
66 all docs	66 docs citations	66 times ranked	2399 citing authors

#	Article	IF	Citations
1	Elastic moduli of normal and pathological human breast tissues: an inversion-technique-based investigation of 169 samples. Physics in Medicine and Biology, 2007, 52, 1565-1576.	1.6	586
2	Visualization and quantification of breast cancer biomechanical properties with magnetic resonance elastography. Physics in Medicine and Biology, 2000, 45, 1591-1610.	1.6	306
3	Measuring the elastic modulus ofex vivosmall tissue samples. Physics in Medicine and Biology, 2003, 48, 2183-2198.	1.6	259
4	A method to measure the hyperelastic parameters ofex vivobreast tissue samples. Physics in Medicine and Biology, 2004, 49, 4395-4405.	1.6	165
5	Porous decellularized adipose tissue foams for soft tissue regeneration. Biomaterials, 2013, 34, 3290-3302.	5.7	156
6	Measurement of the hyperelastic properties of 44 pathologicalex vivobreast tissue samples. Physics in Medicine and Biology, 2009, 54, 2557-2569.	1.6	94
7	An inverse problem solution for measuring the elastic modulus of intactex vivobreast tissue tumours. Physics in Medicine and Biology, 2007, 52, 1247-1260.	1.6	93
8	Characterization and assessment of hyperelastic and elastic properties of decellularized human adipose tissues. Journal of Biomechanics, 2014, 47, 3657-3663.	0.9	58
9	Measurement of the hyperelastic properties of tissue slices with tumour inclusion. Physics in Medicine and Biology, 2008, 53, 7087-7106.	1.6	44
10	Wideband MRE and static mechanical indentation of human liver specimen: Sensitivity of viscoelastic constants to the alteration of tissue structure in hepatic fibrosis. Journal of Biomechanics, 2014, 47, 1665-1674.	0.9	41
11	A constrained reconstruction technique of hyperelasticity parameters for breast cancer assessment. Physics in Medicine and Biology, 2010, 55, 7489-7508.	1.6	40
12	Measurement of Lung Hyperelastic Properties Using Inverse Finite Element Approach. IEEE Transactions on Biomedical Engineering, 2011, 58, 2852-2859.	2.5	26
13	Measurement of in vivo cerebral volumetric strain induced by the Valsalva maneuver. Journal of Biomechanics, 2014, 47, 1652-1657.	0.9	26
14	Comparative biomechanical study of using decellularized human adipose tissues for post-mastectomy and post-lumpectomy breast reconstruction. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 57, 235-245.	1.5	26
15	Statistical finite element method for real-time tissue mechanics analysis. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 595-608.	0.9	20
16	Porous, Ventricular Extracellular Matrix-Derived Foams as a Platform for Cardiac Cell Culture. BioResearch Open Access, 2015, 4, 374-388.	2.6	19
17	Measuring the quasi-static Youngâ€™s modulus of the eardrum using an indentation technique. Hearing Research, 2010, 263, 168-176.	0.9	17
18	Towards clinical prostate ultrasound elastography using full inversion approach. Medical Physics, 2014, 41, 033501.	1.6	17

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19	An iterative hyperelastic parameters reconstruction for breast cancer assessment. Proceedings of SPIE, 2008, , .	0.8	16
20	CT-Enhanced Ultrasound Image of a Totally Deflated Lung for Image-Guided Minimally Invasive Tumor Ablative Procedures. IEEE Transactions on Biomedical Engineering, 2010, 57, 2627-2630.	2.5	16
21	Superviscous properties of the in vivo brain at large scales. Acta Biomaterialia, 2021, 121, 393-404.	4.1	16
22	Estimation of the Young's moduli of fresh human oropharyngeal soft tissues using indentation testing. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 86, 352-358.	1.5	15
23	Combining First- and Second-Order Continuity Constraints in Ultrasound Elastography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2021, 68, 2407-2418.	1.7	15
24	A computational model of the left ventricle biomechanics using a composite material approach. International Journal of Engineering Science, 2017, 111, 61-73.	2.7	14
25	A novel fast full inversion based breast ultrasound elastography technique. Physics in Medicine and Biology, 2013, 58, 2219-2233.	1.6	13
26	CT image construction of a totally deflated lung using deformable model extrapolation. Medical Physics, 2011, 38, 872-883.	1.6	12
27	Breast Ultrasound Elastography Using Full Inversion-Based Elastic Modulus Reconstruction. IEEE Transactions on Computational Imaging, 2017, 3, 774-782.	2.6	12
28	Estimation of Lung's Air Volume and Its Variations Throughout Respiratory CT Image Sequences. IEEE Transactions on Biomedical Engineering, 2011, 58, 152-158.	2.5	11
29	Toward in vivo lung's tissue incompressibility characterization for tumor motion modeling in radiation therapy. Medical Physics, 2013, 40, 051902.	1.6	11
30	Measurement of the hyperelastic properties of 72 normal homogeneous and heterogeneous ex vivo breast tissue samples. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104794.	1.5	9
31	Anatomy-based algorithm for automatic segmentation of human diaphragm in noncontrast computed tomography images. Journal of Medical Imaging, 2016, 3, 046004.	0.8	8
32	Lung CT image based automatic technique for COPD GOLD stage assessment. Expert Systems With Applications, 2017, 85, 194-203.	4.4	8
33	A novel micro-to-macro approach for cardiac tissue mechanics. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 215-229.	0.9	8
34	Towards computer based lung disease diagnosis using accurate lung air segmentation of CT images in exhalation and inhalation phases. Expert Systems With Applications, 2017, 71, 396-403.	4.4	8
35	Towards a biomechanics-based technique for assessing myocardial contractility: an inverse problem approach. Computer Methods in Biomechanics and Biomedical Engineering, 2008, 11, 243-255.	0.9	7
36	A biomechanical approach forin vivolung tumor motion prediction during external beam radiation therapy. Proceedings of SPIE, 2015, , .	0.8	6

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37	Ultrasound Elastography of the Prostate Using an Unconstrained Modulus Reconstruction Technique: A Pilot Clinical Study. Translational Oncology, 2017, 10, 744-751.	1.7	6
38	Constitutive modeling of menisci tissue: a critical review of analytical and numerical approaches. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1979-1996.	1.4	6
39	Estimation of the hyperelastic parameters of fresh human oropharyngeal soft tissues using indentation testing. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 108, 103798.	1.5	6
40	In-vivo lung biomechanical modeling for effective tumor motion tracking in external beam radiation therapy. Computers in Biology and Medicine, 2021, 130, 104231.	3.9	6
41	A novel micro-to-macro structural approach for mechanical characterization of adipose tissue extracellular matrix. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 140-147.	1.5	5
42	A Tissue Mechanics Based Method to Improve Tissue Displacement Estimation in Ultrasound Elastography. , 2020, 2020, 2051-2054.		5
43	Detecting Mechanical Abnormalities in Prostate Tissue Using FE-Based Image Registration. , 2007, 10, 244-251.		5
44	CT image construction of the lung in a totally deflated mode. , 2009, , .		4
45	A real-time trained system for robust speaker verification using relative space of anchor models. Computer Speech and Language, 2010, 24, 545-561.	2.9	4
46	Lung tumor motion prediction during lung brachytherapy using finite element model. Proceedings of SPIE, 2012, , .	0.8	4
47	Constructing a patientâ€specific computer model of the upper airway in sleep apnea patients. Laryngoscope, 2018, 128, 277-282.	1.1	4
48	MR and ultrasound cardiac image dynamic visualization and synchronization over Internet for distributed heart function diagnosis. Computerized Medical Imaging and Graphics, 2021, 88, 101850.	3.5	4
49	A finite element model of myocardial infarction using a composite material approach. Computer Methods in Biomechanics and Biomedical Engineering, 2018, 21, 33-46.	0.9	3
50	Accelerated statistical shape model-based technique for tissue deformation estimation. Proceedings of SPIE, 2009, , .	0.8	2
51	Towards modeling tumor motion in the deflated lung for minimally invasive ablative procedures. Computer Aided Surgery, 2012, 17, 211-220.	1.8	2
52	A novel shapeâ€similarityâ€based elastography technique for prostate cancer assessment. Medical Physics, 2015, 42, 5110-5119.	1.6	2
53	A Composite Material Based Neural Network for Tissue Mechanical Properties Estimation Toward Stage Assessment of Infarction. , 2020, 2020, 2800-2803.		2
54	Novel ultrasound elastography system for multifocal breast cancer assessment. , 2012, , .		1

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55	Incorporating Pathology-Induced Heterogeneities in a Patient-Specific Biomechanical Model of the Lung for Accurate Tumor Motion Estimation*. , 2019, 2019, 6964-6967.		1
56	Determining in-silico left ventricular contraction force of myocardial infarct tissue using a composite material model. , 2018, , .		1
57	Towards ultrasound probe positioning optimization during prostate needle biopsy using pressure feedback. International Journal of Computer Assisted Radiology and Surgery, 2013, 8, 1053-1061.	1.7	0
58	Prostate clinical study of a full inversion unconstrained ultrasound elastography technique. , 2014, , .		0
59	Diaphragm motion characterization using chest motion data for biomechanics-based lung tumor tracking during EBRT. Proceedings of SPIE, 2016, , .	0.8	0
60	A biomechanical approach for in vivo diaphragm muscle motion prediction during normal respiration. Proceedings of SPIE, 2017, , .	0.8	0
61	A FSI-based structural approach for micromechanical characterization of adipose tissue. , 2017, , .		0
62	4DCT Ventilation Map Construction Using Biomechanics-base Image Registration and Enhanced Air Segmentation. , 2019, 2019, 6263-6266.		0
63	Analytical Estimation of Out-of-plane Strain in Ultrasound Elastography to Improve Axial and Lateral Displacement Fields*. , 2020, 2020, 2055-2058.		0
64	Characterizing regional myofiber damage post acute myocardial infarction using global optimization. Computers in Biology and Medicine, 2021, 130, 104207.	3.9	0
65	Subject-specific left ventricular dysfunction modeling using composite material mechanics approach. Proceedings of SPIE, 2017, , .	0.8	0
66	Micromechanics based modelling of in-vivo respiratory motion of the diaphragm muscle with the incorporation of optimized z-disks mechanics. , 2018, , .		0