

Parvin Mousavi

List of Publications by Year in descending order

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117
papers

2,083
citations

218381

26
h-index

276539

41
g-index

119
all docs

119
docs citations

119
times ranked

2254
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards targeted ultrasound-guided prostate biopsy by incorporating model and label uncertainty in cancer detection. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2022, 17, 121-128.	1.7	5
2	Computer-aided identification of stroke-associated motor impairments using a virtual reality augmented robotic system. <i>Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization</i> , 2022, 10, 252-259.	1.3	1
3	Topology preserving stratification of tissue neoplasticity using Deep Neural Maps and microRNA signatures. <i>BMC Bioinformatics</i> , 2022, 23, 38.	1.2	0
4	Feasibility of combined optical and acoustic imaging for surgical cavity scanning. , 2022, , .		0
5	Uncertainty-Aware Deep Ensemble Model For Targeted Ultrasound-Guided Prostate Biopsy. , 2022, , .		4
6	Image registration: Maximum likelihood, minimum entropy and deep learning. <i>Medical Image Analysis</i> , 2021, 69, 101939.	7.0	13
7	Stochastic Sequential Modeling: Toward Improved Prostate Cancer Diagnosis Through Temporal-Ultrasound. <i>Annals of Biomedical Engineering</i> , 2021, 49, 573-584.	1.3	0
8	Design of an Ultrasound-Navigated Prostate Cancer Biopsy System for Nationwide Implementation in Senegal. <i>Journal of Imaging</i> , 2021, 7, 154.	1.7	0
9	Discriminating Neoplastic from Nonneoplastic Tissues Using an miRNA-Based Deep Cancer Classifier. <i>American Journal of Pathology</i> , 2021, , .	1.9	1
10	Interventional imaging: Ultrasound. , 2020, , 701-720.		0
11	Multiple instance learning combined with label invariant synthetic data for guiding systematic prostate biopsy: a feasibility study. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2020, 15, 1023-1031.	1.7	8
12	Improving detection of prostate cancer foci via information fusion of MRI and temporal enhanced ultrasound. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2020, 15, 1215-1223.	1.7	20
13	Micro-vibrations underlying temporal enhanced ultrasound: The effect of scatterer size and elasticity. <i>Journal of Applied Physics</i> , 2019, 125, 164502.	1.1	2
14	Deep neural maps for unsupervised visualization of high-grade cancer in prostate biopsies. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2019, 14, 1009-1016.	1.7	17
15	Step-wise identification of ultrasound-visible anatomical landmarks for 3D visualization of scoliotic spine. , 2019, , .		0
16	Investigation of Physical Phenomena Underlying Temporal-Enhanced Ultrasound as a New Diagnostic Imaging Technique: Theory and Simulations. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2018, 65, 400-410.	1.7	16
17	Stochastic Modeling of Temporal Enhanced Ultrasound: Impact of Temporal Properties on Prostate Cancer Characterization. <i>IEEE Transactions on Biomedical Engineering</i> , 2018, 65, 1798-1809.	2.5	4
18	Toward a real-time system for temporal enhanced ultrasound-guided prostate biopsy. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2018, 13, 1201-1209.	1.7	8

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19	Broadband Vibration Detection in Tissue Phantoms Using a Fiber Fabry-Perot Cavity. IEEE Transactions on Biomedical Engineering, 2018, 65, 921-927.	2.5	17
20	Learning from Noisy Label Statistics: Detecting High Grade Prostate Cancer in Ultrasound Guided Biopsy. Lecture Notes in Computer Science, 2018, , 21-29.	1.0	7
21	A deep learning approach for real time prostate segmentation in freehand ultrasound guided biopsy. Medical Image Analysis, 2018, 48, 107-116.	7.0	68
22	Deep Recurrent Neural Networks for Prostate Cancer Detection: Analysis of Temporal Enhanced Ultrasound. IEEE Transactions on Medical Imaging, 2018, 37, 2695-2703.	5.4	57
23	3D tissue mimicking biophantoms for ultrasound imaging: bioprinting and image analysis. , 2018, , .		0
24	Reduction of Assessment Time for Stroke-Related Impairments Using Robotic Evaluation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 945-955.	2.7	8
25	Transfer learning from RF to B-mode temporal enhanced ultrasound features for prostate cancer detection. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1111-1121.	1.7	25
26	Detection and grading of prostate cancer using temporal enhanced ultrasound: combining deep neural networks and tissue mimicking simulations. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 1293-1305.	1.7	36
27	Classification of clinical significance of MRI prostate findings using 3D convolutional neural networks. Proceedings of SPIE, 2017, 10134, .	0.8	42
28	Model-based registration of preprocedure MR and intraprocedure US of the lumbar spine. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 973-982.	1.7	8
29	Tissue mimicking simulations for temporal enhanced ultrasound-based tissue typing. Proceedings of SPIE, 2017, , .	0.8	2
30	Models of temporal enhanced ultrasound data for prostate cancer diagnosis: the impact of time-series order. , 2017, , .		0
31	Clinical Target-Volume Delineation in Prostate Brachytherapy Using Residual Neural Networks. Lecture Notes in Computer Science, 2017, , 365-373.	1.0	22
32	Visualization of scoliotic spine using ultrasound-accessible skeletal landmarks. Proceedings of SPIE, 2017, , .	0.8	2
33	The Fiber Fabry-Perot Cavity as a Multipurpose Sensor. , 2017, , .		0
34	Detection of prostate cancer using temporal sequences of ultrasound data: a large clinical feasibility study. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 947-956.	1.7	34
35	Fusion of multi-parametric MRI and temporal ultrasound for characterization of prostate cancer: in vivo feasibility study. , 2016, , .		3
36	Classification of prostate cancer grade using temporal ultrasound: in vivo feasibility study. Proceedings of SPIE, 2016, , .	0.8	0

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37	Registration of a statistical model to intraoperative ultrasound for scaphoid screw fixation. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 957-965.	1.7	8
38	Automatic Segmentation of Wrist Bones in CT Using a Statistical Wrist Shape & Pose Model. IEEE Transactions on Medical Imaging, 2016, 35, 1789-1801.	5.4	30
39	Prostate Cancer: Improved Tissue Characterization by Temporal Modeling of Radio-Frequency Ultrasound Echo Data. Lecture Notes in Computer Science, 2016, , 644-652.	1.0	3
40	Classifying Cancer Grades Using Temporal Ultrasound for Transrectal Prostate Biopsy. Lecture Notes in Computer Science, 2016, , 653-661.	1.0	7
41	Robot-based assessment of motor and proprioceptive function identifies biomarkers for prediction of functional independence measures. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 105.	2.4	25
42	Scaphoid fracture fixation: localization of bones through statistical model to ultrasound registration. Proceedings of SPIE, 2015, , .	0.8	0
43	Using Hidden Markov Models to capture temporal aspects of ultrasound data in prostate cancer. , 2015, , .		9
44	Characterization of aggressive prostate cancer using ultrasound RF time series. , 2015, , .		6
45	Enhanced Dynamic EMG-Force Estimation Through Calibration and PCI Modeling. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 41-50.	2.7	43
46	Ultrasound-Based Characterization of Prostate Cancer Using Joint Independent Component Analysis. IEEE Transactions on Biomedical Engineering, 2015, 62, 1796-1804.	2.5	14
47	Computer-Aided Prostate Cancer Detection Using Ultrasound RF Time Series: In Vivo Feasibility Study. IEEE Transactions on Medical Imaging, 2015, 34, 2248-2257.	5.4	37
48	Bone enhancement in ultrasound using local spectrum variations for guiding percutaneous scaphoid fracture fixation procedures. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 959-969.	1.7	18
49	Computerized training system for ultrasound-guided lumbar puncture on abnormal spine models: a randomized controlled trial. Canadian Journal of Anaesthesia, 2015, 62, 777-784.	0.7	41
50	Augmenting MRIâ€“transrectal ultrasound-guided prostate biopsy with temporal ultrasound data: a clinical feasibility study. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 727-735.	1.7	11
51	Biomechanically Constrained Surface Registration: Application to MR-TRUS Fusion for Prostate Interventions. IEEE Transactions on Medical Imaging, 2015, 34, 2404-2414.	5.4	22
52	Ultrasound-Based Detection of Prostate Cancer Using Automatic Feature Selection with Deep Belief Networks. Lecture Notes in Computer Science, 2015, , 70-77.	1.0	21
53	A multi-vertebrae CT to US registration of the lumbar spine in clinical data. International Journal of Computer Assisted Radiology and Surgery, 2015, 10, 1371-1381.	1.7	26
54	PINBPA: Cytoscape app for network analysis of GWAS data. Bioinformatics, 2015, 31, 262-264.	1.8	29

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55	A global CT to US registration of the lumbar spine. , 2014, , .		0
56	SimITK: model driven engineering for medical imaging. Proceedings of SPIE, 2014, , .	0.8	0
57	Hierarchical task ordering for time reduction on KINARM assessment protocol. , 2014, 2014, 2517-20.		5
58	SimITK: Visual Programming of the ITK Image-Processing Library within Simulink. Journal of Digital Imaging, 2014, 27, 220-230.	1.6	4
59	Spinal Curvature Measurement by Tracked Ultrasound Snapshots. Ultrasound in Medicine and Biology, 2014, 40, 447-454.	0.7	73
60	CT to US Registration of the Lumbar Spine: A Clinical Feasibility Study. Lecture Notes in Computer Science, 2014, , 108-117.	1.0	5
61	Ultrasound-Based Predication of Prostate Cancer in MRI-guided Biopsy. Lecture Notes in Computer Science, 2014, , 142-150.	1.0	3
62	Prediction of stroke-related diagnostic and prognostic measures using robot-based evaluation. , 2013, 2013, 6650457.		9
63	Tissue Classification Using Ultrasound-Induced Variations in Acoustic Backscattering Features. IEEE Transactions on Biomedical Engineering, 2013, 60, 310-320.	2.5	30
64	Ultrasound-Guided Characterization of Interstitial Ablated Tissue Using RF Time Series: Feasibility Study. IEEE Transactions on Biomedical Engineering, 2013, 60, 1608-1618.	2.5	15
65	An Augmented Reality Haptic Training Simulator for Spinal Needle Procedures. IEEE Transactions on Biomedical Engineering, 2013, 60, 3009-3018.	2.5	74
66	Surface EMG force modeling with joint angle based calibration. Journal of Electromyography and Kinesiology, 2013, 23, 416-424.	0.7	22
67	Can Carotid Bulb Plaque Assessment Rule Out Significant Coronary Artery Disease? A Comparison of Plaque Quantification by Two- and Three-Dimensional Ultrasound. Journal of the American Society of Echocardiography, 2013, 26, 86-95.	1.2	58
68	Experimental assessment of error in an electromagnetically-tracked ultrasound-guided needle navigation system. Proceedings of SPIE, 2013, , .	0.8	1
69	Ultrasound-Based Characterization of Prostate Cancer: An in vivo Clinical Feasibility Study. Lecture Notes in Computer Science, 2013, 16, 279-286.	1.0	7
70	Enhanced multi-site EMG-force estimation using contact pressure. , 2012, 2012, 3098-101.		0
71	Spinal Needle Navigation by Tracked Ultrasound Snapshots. IEEE Transactions on Biomedical Engineering, 2012, 59, 2766-2772.	2.5	58
72	Feature-based multibody rigid registration of CT and ultrasound images of lumbar spine. Medical Physics, 2012, 39, 3154-3166.	1.6	29

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73	GPU accelerated implementation of ultrasound radio-frequency time series analysis. Proceedings of SPIE, 2012, , .	0.8	2
74	EMG force modeling using parallel cascade identification. Journal of Electromyography and Kinesiology, 2012, 22, 469-477.	0.7	45
75	Biomechanically constrained groupwise ultrasound to CT registration of the lumbar spine. Medical Image Analysis, 2012, 16, 662-674.	7.0	67
76	Multi-modal registration of speckle-tracked freehand 3D ultrasound to CT in the lumbar spine. Medical Image Analysis, 2012, 16, 675-686.	7.0	29
77	Computer-aided tissue characterization using ultrasound-induced thermal effects: analytical formulation and in-vitro animal study. , 2011, , .		6
78	Tissue classification using depth-dependent ultrasound time series analysis: in-vitro animal study. Proceedings of SPIE, 2011, , .	0.8	6
79	iCTNet: A Cytoscape plugin to produce and analyze integrative complex traits networks. BMC Bioinformatics, 2011, 12, 380.	1.2	36
80	Joint angle-based EMG amplitude calibration. , 2011, 2011, 4439-42.		5
81	Reverse engineering of gene regulatory networks: A systems approach. , 2011, , .		0
82	Towards an augmented ultrasound guided spinal needle insertion system. , 2011, 2011, 3459-62.		2
83	Phantom validation for ultrasound to statistical shape model registration of human pelvis. Proceedings of SPIE, 2011, , .	0.8	7
84	GPU accelerated registration of a statistical shape model of the lumbar spine to 3D ultrasound images. Proceedings of SPIE, 2011, , .	0.8	3
85	Monitoring of Tissue Ablation Using Time Series of Ultrasound RF Data. Lecture Notes in Computer Science, 2011, 14, 379-386.	1.0	11
86	Biomechanically Constrained Groupwise Statistical Shape Model to Ultrasound Registration of the Lumbar Spine. Lecture Notes in Computer Science, 2011, , 47-54.	1.0	5
87	Tissue typing using ultrasound RF time series: Experiments with animal tissue samples. Medical Physics, 2010, 37, 4401-4413.	1.6	43
88	High-throughput detection of prostate cancer in histological sections using probabilistic pairwise Markov models. Medical Image Analysis, 2010, 14, 617-629.	7.0	107
89	Single nucleotide polymorphism selection using independent component analysis. , 2010, 2010, 6186-9.		2
90	Ultrasound guided spine needle insertion. Proceedings of SPIE, 2010, , .	0.8	15

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91	Dynamic modeling of EMG-force relationship using parallel cascade identification. , 2010, 2010, 1328-31.		6
92	Fast orthogonal search for genetic feature selection. , 2010, 2010, 1077-80.		3
93	Registration of a Statistical Shape Model of the Lumbar Spine to 3D Ultrasound Images. Lecture Notes in Computer Science, 2010, 13, 68-75.	1.0	27
94	Tissue characterization using multiscale products of wavelet transform of ultrasound radio frequency echoes. , 2009, 2009, 479-82.		4
95	A new scheme for curved needle segmentation in three-dimensional ultrasound images. , 2009, 2009, 1067-1070.		39
96	Fusion of electromagnetic tracking with speckle-tracked 3D freehand ultrasound using an unscented Kalman filter. Proceedings of SPIE, 2009, , .	0.8	13
97	Group-wise registration of ultrasound to CT images of human vertebrae. , 2009, , .		7
98	Tissue typing with ultrasound RF time series: phantom studies. , 2009, , .		2
99	Probabilistic pairwise Markov models: application to prostate cancer detection. Proceedings of SPIE, 2009, , .	0.8	5
100	Augmenting Detection of Prostate Cancer in Transrectal Ultrasound Images Using SVM and RF Time Series. IEEE Transactions on Biomedical Engineering, 2009, 56, 2214-2224.	2.5	74
101	Automated detection of prostate cancer using wavelet transform features of ultrasound RF time series. , 2009, , .		7
102	Biomechanically Constrained Groupwise US to CT Registration of the Lumbar Spine. Lecture Notes in Computer Science, 2009, 12, 803-810.	1.0	12
103	Reverse engineering of the transcriptional subnetwork in the yeast cell cycle pathway using Dynamic Bayesian Networks and evolutionary search. , 2008, , .		1
104	Reverse engineering time series of gene expression data using Dynamic Bayesian networks and covariance matrix adaptation evolution strategy with explicit memory. , 2008, , .		0
105	Prostate Cancer Probability Maps Based on Ultrasound RF Time Series and SVM Classifiers. Lecture Notes in Computer Science, 2008, 11, 76-84.	1.0	2
106	Increased Transcriptional Activity of Milk-Related Genes following the Active Phase of Experimental Autoimmune Encephalomyelitis and Multiple Sclerosis. Journal of Immunology, 2007, 179, 4074-4082.	0.4	19
107	A new approach to analysis of RF ultrasound echo signals for tissue characterization: animal studies. , 2007, , .		9
108	Computer-Aided Diagnosis of Prostate Cancer with Emphasis on Ultrasound-Based Approaches: A Review. Ultrasound in Medicine and Biology, 2007, 33, 1010-1028.	0.7	54

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109	Tissue Characterization Using Fractal Dimension of High Frequency Ultrasound RF Time Series. , 2007, 10, 900-908.		17
110	Identification of Anatomical Landmarks for Registration of CT and Ultrasound Images in Computer-Assisted Shoulder Arthroscopy. , 2006, 2006, 416-9.		5
111	Deformable registration using scale space keypoints. , 2006, 6144, 791.		19
112	Detection of Prostate Cancer from RF Ultrasound Echo Signals Using Fractal Analysis. , 2006, 2006, 2400-3.		22
113	Predictive modeling of therapy response in multiple sclerosis using gene expression data. , 2006, 2006, 5519-22.		5
114	Detection of Prostate Cancer from RF Ultrasound Echo Signals Using Fractal Analysis. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	1
115	10 Advanced data mining and predictive modelling at the core of personalised medicine. Studies in Multidisciplinarity, 2005, , 165-192.	0.0	0
116	Transcription-Based Prediction of Response to IFN γ Using Supervised Computational Methods. PLoS Biology, 2004, 3, e2.	2.6	144
117	Feature analysis and centromere segmentation of human chromosome images using an iterative fuzzy algorithm. IEEE Transactions on Biomedical Engineering, 2002, 49, 363-371.	2.5	14