Parvin Mousavi

List of Publications by Year
in descending order

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	Transcription-Based Prediction of Response to IFNβ Using Supervised Computational Methods. PLoS Biology, 2004, 3, e2.	2.6	144
2	High-throughput detection of prostate cancer in histological sections using probabilistic pairwise Markov models. Medical Image Analysis, 2010, 14, 617-629.	7.0	107
3	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
4	An Augmented Reality Haptic Training Simulator for Spinal Needle Procedures. IEEE Transactions on Biomedical Engineering, 2013, 60, 3009-3018.	2.5	74
5	Spinal Curvature Measurement by Tracked Ultrasound Snapshots. Ultrasound in Medicine and Biology, 2014, 40, 447-454.	0.7	73
6	A deep learning approach for real time prostate segmentation in freehand ultrasound guided biopsy. Medical Image Analysis, 2018, 48, 107-116.	7.0	68
7	Biomechanically constrained groupwise ultrasound to CT registration of the lumbar spine. Medical Image Analysis, 2012, 16, 662-674.	7.0	67
8	Spinal Needle Navigation by Tracked Ultrasound Snapshots. IEEE Transactions on Biomedical Engineering, 2012, 59, 2766-2772.	2.5	58
9	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
10	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
11	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
12	EMG–force modeling using parallel cascade identification. Journal of Electromyography and Kinesiology, 2012, 22, 469-477.	0.7	45
13	Tissue typing using ultrasound RF time series: Experiments with animal tissue samples. Medical Physics, 2010, 37, 4401-4413.	1.6	43
14	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
15	Classification of clinical significance of MRI prostate findings using 3D convolutional neural networks. Proceedings of SPIE, 2017, 10134, .	0.8	42
16	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
17	A new scheme for curved needle segmentation in three-dimensional ultrasound images. , 2009, 2009, 1067-1070.		39
18	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

#	Article	IF	Citations
19	iCTNet: A Cytoscape plugin to produce and analyze integrative complex traits networks. BMC Bioinformatics, 2011, 12, 380.	1.2	36
20	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
21	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
22	Tissue Classification Using Ultrasound-Induced Variations in Acoustic Backscattering Features. IEEE Transactions on Biomedical Engineering, 2013, 60, 310-320.	2.5	30
23	Automatic Segmentation of Wrist Bones in CT Using a Statistical Wrist Shape <formula formulatype="inline"> <tex Notation="TeX">$+$</tex> </formula> Pose Model. IEEE Transactions on Medical Imaging, 2016, 35, 1789-1801.	5.4	30
24	Feature€based multibody rigid registration of CT and ultrasound images of lumbar spine. Medical Physics, 2012, 39, 3154-3166.	1.6	29
25	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
26	PINBPA: Cytoscape app for network analysis of GWAS data. Bioinformatics, 2015, 31, 262-264.	1.8	29
27	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
28	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
29	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
30	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
31	Detection of Prostate Cancer from RF Ultrasound Echo Signals Using Fractal Analysis. , 2006, 2006, 2400-3.		22
32	Surface EMG force modeling with joint angle based calibration. Journal of Electromyography and Kinesiology, 2013, 23, 416-424.	0.7	22
33	Biomechanically Constrained Surface Registration: Application to MR-TRUS Fusion for Prostate Interventions. IEEE Transactions on Medical Imaging, 2015, 34, 2404-2414.	5.4	22
34	Clinical Target-Volume Delineation in Prostate Brachytherapy Using Residual Neural Networks. Lecture Notes in Computer Science, 2017, , 365-373.	1.0	22
35	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
36	Improving detection of prostate cancer foci via information fusion of MRI and temporal enhanced ultrasound. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 1215-1223.	1.7	20

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37	Deformable registration using scale space keypoints. , 2006, 6144, 791.		19
38	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
39	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
40	Broadband Vibration Detection in Tissue Phantoms Using a Fiber Fabry–Perot Cavity. IEEE Transactions on Biomedical Engineering, 2018, 65, 921-927.	2.5	17
41	Deep neural maps for unsupervised visualization of high-grade cancer in prostate biopsies. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1009-1016.	1.7	17
42	Tissue Characterization Using Fractal Dimension of High Frequency Ultrasound RF Time Series. , 2007, 10, 900-908.		17
43	Investigation of Physical Phenomena Underlying Temporal-Enhanced Ultrasound as a New Diagnostic Imaging Technique: Theory and Simulations. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 400-410.	1.7	16
44	Ultrasound guided spine needle insertion. Proceedings of SPIE, 2010, , .	0.8	15
45	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
46	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
47	Ultrasound-Based Characterization of Prostate Cancer Using Joint Independent Component Analysis. IEEE Transactions on Biomedical Engineering, 2015, 62, 1796-1804.	2.5	14
48	Fusion of electromagnetic tracking with speckle-tracked 3D freehand ultrasound using an unscented Kalman filter. Proceedings of SPIE, 2009, , .	0.8	13
49	Image registration: Maximum likelihood, minimum entropy and deep learning. Medical Image Analysis, 2021, 69, 101939.	7.0	13
50	Biomechanically Constrained Groupwise US to CT Registration of the Lumbar Spine. Lecture Notes in Computer Science, 2009, 12, 803-810.	1.0	12
51	Augmenting MRI–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
52	Monitoring of Tissue Ablation Using Time Series of Ultrasound RF Data. Lecture Notes in Computer Science, 2011, 14, 379-386.	1.0	11
53	A new approach to analysis of RF ultrasound echo signals for tissue characterization: animal studies. , 2007, , .		9
54	Prediction of stroke-related diagnostic and prognostic measures using robot-based evaluation. , 2013, 2013, 6650457.		9

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55	Using Hidden Markov Models to capture temporal aspects of ultrasound data in prostate cancer. , 2015, , .		9
56	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
57	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
58	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
59	Toward a real-time system for temporal enhanced ultrasound-guided prostate biopsy. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1201-1209.	1.7	8
60	Multiple instance learning combined with label invariant synthetic data for guiding systematic prostate biopsy: a feasibility study. International Journal of Computer Assisted Radiology and Surgery, 2020, 15, 1023-1031.	1.7	8
61	Group-wise registration of ultrasound to CT images of human vertebrae. , 2009, , .		7
62	Automated detection of prostate cancer using wavelet transform features of ultrasound RF time series. , 2009, , .		7
63	Phantom validation for ultrasound to statistical shape model registration of human pelvis. Proceedings of SPIE, 2011, , .	0.8	7
64	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
65	Classifying Cancer Grades Using Temporal Ultrasound for Transrectal Prostate Biopsy. Lecture Notes in Computer Science, 2016, , 653-661.	1.0	7
66	Ultrasound-Based Characterization of Prostate Cancer: An in vivo Clinical Feasibility Study. Lecture Notes in Computer Science, 2013, 16, 279-286.	1.0	7
67	Dynamic modeling of EMG-force relationship using parallel cascade identification. , 2010, 2010, 1328-31.		6
68	Computer-aided tissue characterization using ultrasound-induced thermal effects: analytical formulation and in-vitro animal study. , 2011, , .		6
69	Tissue classification using depth-dependent ultrasound time series analysis: in-vitro animal study. Proceedings of SPIE, 2011, , .	0.8	6
70	Characterization of aggressive prostate cancer using ultrasound RF time series. , 2015, , .		6
71	Identification of Anatomical Landmarks for Registration of CT and Ultrasound Images in Computer-Assisted Shoulder Arthroscopy. , 2006, 2006, 416-9.		5
72	Predictive modeling of therapy response in multiple sclerosis using gene expression data. , 2006, 2006, 5519-22.		5

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73	Probabilistic pairwise Markov models: application to prostate cancer detection. Proceedings of SPIE, 2009, , .	0.8	5
74	Joint angle-based EMG amplitude calibration. , 2011, 2011, 4439-42.		5
75	Hierarchical task ordering for time reduction on KINARM assessment protocol. , 2014, 2014, 2517-20.		5
76	CT to US Registration of the Lumbar Spine: A Clinical Feasibility Study. Lecture Notes in Computer Science, 2014, , 108-117.	1.0	5
77	Biomechanically Constrained Groupwise Statistical Shape Model to Ultrasound Registration of the Lumbar Spine. Lecture Notes in Computer Science, 2011, , 47-54.	1.0	5
78	Towards targeted ultrasound-guided prostate biopsy by incorporating model and label uncertainty in cancer detection. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 121-128.	1.7	5
79	Tissue characterization using multiscale products of wavelet transform of ultrasound radio frequency echoes. , 2009, 2009, 479-82.		4
80	SimITK: Visual Programming of the ITK Image-Processing Library within Simulink. Journal of Digital Imaging, 2014, 27, 220-230.	1.6	4
81	Stochastic Modeling of Temporal Enhanced Ultrasound: Impact of Temporal Properties on Prostate Cancer Characterization. IEEE Transactions on Biomedical Engineering, 2018, 65, 1798-1809.	2.5	4
82	Uncertainty-Aware Deep Ensemble Model For Targeted Ultrasound-Guided Prostate Biopsy. , 2022, , .		4
83	Fast orthogonal search for genetic feature selection. , 2010, 2010, 1077-80.		3
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	Fusion of multi-parametric MRI and temporal ultrasound for characterization of prostate cancer: in vivo feasibility study. , 2016, , .		3
86	Ultrasound-Based Predication of Prostate Cancer in MRI-guided Biopsy. Lecture Notes in Computer Science, 2014, , 142-150.	1.0	3
87	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
88	Tissue typing with ultrasound RF time series: phantom studies. , 2009, , .		2
89	Single nucleotide polymorphism selection using independent component analysis. , 2010, 2010, 6186-9.		2
90	Towards an augmented ultrasound guided spinal needle insertion system. , 2011, 2011, 3459-62.		2

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91	GPU accelerated implementation of ultrasound radio-frequency time series analysis. Proceedings of SPIE, 2012, , .	0.8	2
92	Tissue mimicking simulations for temporal enhanced ultrasound-based tissue typing. Proceedings of SPIE, 2017, , .	0.8	2
93	Micro-vibrations underlying temporal enhanced ultrasound: The effect of scatterer size and elasticity. Journal of Applied Physics, 2019, 125, 164502.	1.1	2
94	Visualization of scoliotic spine using ultrasound-accessible skeletal landmarks. Proceedings of SPIE, 2017, , .	0.8	2
95	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
96	Reverse engineering of the transcriptional subnetwork in the yeast cell cycle pathway using Dynamic Bayesian Networks and evolutionary search. , 2008, , .		1
97	Experimental assessment of error in an electromagnetically-tracked ultrasound-guided needle navigation system. Proceedings of SPIE, 2013, , .	0.8	1
98	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
99	Discriminating Neoplastic from Nonneoplastic Tissues Using an miRNA-Based Deep Cancer Classifier. American Journal of Pathology, 2021, , .	1.9	1
100	Computer-aided identification of stroke-associated motor impairments using a virtual reality augmented robotic system. Computer Methods in Biomechanics and Biomedical Engineering: Imaging and Visualization, 2022, 10, 252-259.	1.3	1
101	10 Advanced data mining and predictive modelling at the core of personalised medicine. Studies in Multidisciplinarity, 2005, , 165-192.	0.0	0
102	Reverse engineering time series of gene expression data using Dynamic Bayesian networks and covariance matrix adaptation evolution strategy with explicit memory. , 2008, , .		0
103	Reverse engineering of gene regulatory networks: A systems approach. , 2011, , .		0
104	Enhanced multi-site EMG-force estimation using contact pressure. , 2012, 2012, 3098-101.		0
105	A global CT to US registration of the lumbar spine. , 2014, , .		0
106	SimITK: model driven engineering for medical imaging. Proceedings of SPIE, 2014, , .	0.8	0
107	Scaphoid fracture fixation: localization of bones through statistical model to ultrasound registration. Proceedings of SPIE, 2015, , .	0.8	0
108	Classification of prostate cancer grade using temporal ultrasound: in vivo feasibility study. Proceedings of SPIE, 2016, , .	0.8	0

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109	Models of temporal enhanced ultrasound data for prostate cancer diagnosis: the impact of time-series order. , 2017, , .		0
110	Interventional imaging: Ultrasound. , 2020, , 701-720.		0
111	Stochastic Sequential Modeling: Toward Improved Prostate Cancer Diagnosis Through Temporal-Ultrasound. Annals of Biomedical Engineering, 2021, 49, 573-584.	1.3	0
112	Design of an Ultrasound-Navigated Prostate Cancer Biopsy System for Nationwide Implementation in Senegal. Journal of Imaging, 2021, 7, 154.	1.7	0
113	The Fiber Fabry-PÃ©rot Cavity as a Multipurpose Sensor. , 2017, , .		0
114	3D tissue mimicking biophantoms for ultrasound imaging: bioprinting and image analysis. , 2018, , .		0
115	Step-wise identification of ultrasound-visible anatomical landmarks for 3D visualization of scoliotic spine. , 2019, , .		0
116	Topology preserving stratification of tissue neoplasticity using Deep Neural Maps and microRNA signatures. BMC Bioinformatics, 2022, 23, 38.	1.2	0
117	Feasibility of combined optical and acoustic imaging for surgical cavity scanning. , 2022, , .		0