Richard W Prager

List of Publications by Year
in descending order

95 papers	2,939 citations	109321 35 h-index	182427 51 g-index
103 all docs	103 docs citations	103 times ranked	1820 citing authors

#	Article	IF	Citations
1	Regularised marching tetrahedra: improved iso-surface extraction. Computers and Graphics, 1999, 23, 583-598.	2.5	255
2	Stradx: real-time acquisition and visualization of freehand three-dimensional ultrasound. Medical Image Analysis, 1999, 3, 129-140.	11.6	147
3	High-definition freehand 3-D ultrasound. Ultrasound in Medicine and Biology, 2003, 29, 529-546.	1.5	139
4	Engineering a freehand 3D ultrasound system. Pattern Recognition Letters, 2003, 24, 757-777.	4.2	116
5	Surface interpolation from sparse cross sections using region correspondence. IEEE Transactions on Medical Imaging, 2000, 19, 1106-1114.	8.9	90
6	Sensorless freehand 3D ultrasound in real tissue: Speckle decorrelation without fully developed speckle. Medical Image Analysis, 2006, 10, 137-149.	11.6	78
7	Correction of probe pressure artifacts in freehand 3D ultrasound. Medical Image Analysis, 2002, 6, 199-214.	11.6	72
8	A quality-guided displacement tracking algorithm for ultrasonic elasticity imaging. Medical Image Analysis, 2009, 13, 286-296.	11.6	71
9	An analytical framework for optimizing neural networks. Neural Networks, 1993, 6, 79-97.	5.9	70
10	Freehand Ultrasound Elastography with a 3-D Probe. Ultrasound in Medicine and Biology, 2008, 34, 463-474.	1.5	68
11	Fast surface and volume estimation from non-parallel cross-sections, for freehand three-dimensional ultrasound. Medical Image Analysis, 1999, 3, 141-173.	11.6	66
12	Polyhedral Combinatorics and Neural Networks. Neural Computation, 1994, 6, 161-180.	2.2	62
13	3D elastography using freehand ultrasound. Ultrasound in Medicine and Biology, 2006, 32, 529-545.	1.5	62
14	Decompression and speckle detection for ultrasound images using the homodyned k-distribution. Pattern Recognition Letters, 2003, 24, 705-713.	4.2	61
15	Phase-based ultrasonic deformation estimation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 94-111.	3.0	58
16	Development of low entropy coding in a recurrent network. Network: Computation in Neural Systems, 1996, 7, 277-284.	3.6	58
17	Sensorless freehand 3-D ultrasound using regression of the echo intensity. Ultrasound in Medicine and Biology, 2003, 29, 437-446.	1.5	57
18	Sensorless Reconstruction of Unconstrained Freehand 3D Ultrasound Data. Ultrasound in Medicine and Biology, 2007, 33, 408-419.	1.5	56

#	Article	IF	Citations
19	A Spatial Coherence Approach to Minimum Variance Beamforming for Plane-Wave Compounding. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 522-534.	3.0	51
20	Spatial mapping of the brachial plexus using three-dimensional ultrasound. British Journal of Radiology, 2005, 78, 1086-1094.	2.2	49
21	Modeling ultrasound imaging as a linear, shift-variant system. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 549-563.	3.0	49
22	Wavelet restoration of medical pulse-echo ultrasound images in an EM framework. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 550-568.	3.0	49
23	Real-time quasi-static ultrasound elastography. Interface Focus, 2011, 1, 540-552.	3.0	48
24	High definition three-dimensional ultrasound to localise the tumour bed: A breast radiotherapy planning study. Radiotherapy and Oncology, 2007, 84, 233-241.	0.6	47
25	Real-Time Freehand 3D Ultrasound Calibration. Ultrasound in Medicine and Biology, 2008, 34, 239-251.	1.5	47
26	Rapid registration for wide field of view freehand three-dimensional ultrasound. IEEE Transactions on Medical Imaging, 2003, 22, 1344-1357.	8.9	46
27	Estimation of Displacement Location for Enhanced Strain Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 1751-1771.	3.0	45
28	Estimation of Average Speed of Sound Using Deconvolution of Medical Ultrasound Data. Ultrasound in Medicine and Biology, 2010, 36, 623-636.	1.5	45
29	An Intelligent Interface for Freehand Strain Imaging. Ultrasound in Medicine and Biology, 2008, 34, 1117-1128.	1.5	44
30	High-Resolution Ultrasound Imaging With Unified Pixel-Based Beamforming. IEEE Transactions on Medical Imaging, 2016, 35, 98-108.	8.9	43
31	Analysis of speckle in ultrasound images using fractional order statistics and the homodyned k-distribution. Ultrasonics, 2002, 40, 133-137.	3.9	42
32	Freehand 3D Ultrasound Calibration: A Review. , 2009, , 47-84.		42
33	Freehand 3D ultrasound without voxels: volume measurement and visualisation using the Stradx system. Ultrasonics, 2002, 40, 109-115.	3.9	41
34	Comparison of Freehand 3-D Ultrasound Calibration Techniques Using a Stylus. Ultrasound in Medicine and Biology, 2008, 34, 1610-1621.	1.5	39
35	3D ultrasound measurement of large organ volume. Medical Image Analysis, 2001, 5, 41-54.	11.6	38
36	Ultrasound attenuation measurement in the presence of scatterer variation for reduction of shadowing and enhancement. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 2346-2360.	3.0	35

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37	Rapid, easy and reliable calibration for freehand 3D ultrasound. Ultrasound in Medicine and Biology, 2006, 32, 823-835.	1.5	35
38	Development of low entropy coding in a recurrent network. Network: Computation in Neural Systems, 1996, 7, 277-284.	3.6	34
39	A hybrid displacement estimation method for ultrasonic elasticity imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 866-882.	3.0	31
40	Speckle classification for sensorless freehand 3-D ultrasound. Ultrasound in Medicine and Biology, 2005, 31, 1499-1508.	1.5	30
41	Sensitivity to point-spread function parameters in medical ultrasound image deconvolution. Ultrasonics, 2009, 49, 344-357.	3.9	28
42	Subsample interpolation strategies for sensorless freehand 3D ultrasound. Ultrasound in Medicine and Biology, 2006, 32, 1897-1904.	1.5	25
43	Minimum Variance Approaches to Ultrasound Pixel-Based Beamforming. IEEE Transactions on Medical Imaging, 2017, 36, 374-384.	8.9	24
44	A mechanical instrument for 3D ultrasound probe calibration. Ultrasound in Medicine and Biology, 2005, 31, 505-518.	1.5	22
45	Rotational motion in sensorless freehand three-dimensional ultrasound. Ultrasonics, 2008, 48, 412-422.	3.9	20
46	Calibration of an orientation sensor for freehand 3D ultrasound and its use in a hybrid acquisition system. BioMedical Engineering OnLine, 2008, 7, 5.	2.7	17
47	Estimation of speed of sound in dual-layered media using medical ultrasound image deconvolution. Ultrasonics, 2010, 50, 716-725.	3.9	17
48	Narrow-band volume rendering for freehand 3D ultrasound. Computers and Graphics, 2002, 26, 463-476.	2.5	15
49	Ultrasound Compounding With Automatic Attenuation Compensation Using Paired Angle Scans. Ultrasound in Medicine and Biology, 2007, 33, 630-642.	1.5	13
50	Ultrasound Pixel-Based Beamforming With Phase Alignments of Focused Beams. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2017, 64, 937-946.	3.0	13
51	Dynamic Resolution Selection in Ultrasonic Strain Imaging. Ultrasound in Medicine and Biology, 2008, 34, 809-823.	1.5	12
52	RF and amplitude-based probe pressure correction for 3D ultrasound. Ultrasound in Medicine and Biology, 2005, 31, 493-503.	1.5	11
53	Breast Cancers: Noninvasive Method of Preoperative Localization with Three-dimensional US and Surface Contour Mapping. Radiology, 2007, 245, 556-566.	7.3	11
54	Improved ultrasound image quality with pixel-based beamforming using a Wiener-filter and a SNR-dependent coherence factor. Ultrasonics, 2022, 119, 106594.	3.9	11

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55	Two- and three-dimensional ultrasound in the development of a needle-free injection system. British Journal of Radiology, 2004, 77, 236-242.	2.2	10
56	The general properties including accuracy and resolution of linear filtering methods for strain estimation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2008, 55, 2363-2368.	3.0	10
57	Efficient implementation of spatially-varying 3-D ultrasound deconvolution. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 234-238.	3.0	10
58	Volume-based three-dimensional metamorphosis using sphere-guided region correspondence. Visual Computer, 2001, 17, 397-414.	3.5	9
59	Uniform precision ultrasound strain imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2009, 56, 2420-2436.	3.0	9
60	3-D ultrasonic strain imaging using freehand scanning and a mechanically-swept probe - correspondence. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 501-506.	3.0	9
61	A clinical system for three-dimensional extended-field-of-view ultrasound. British Journal of Radiology, 2012, 85, e919-e924.	2.2	9
62	<title>Design of a clinical free-hand 3D ultrasound system</title>. , 2000, , .		8
63	3D reconstruction of the skeletal anatomy of the normal neonatal foot using 3D ultrasound. British Journal of Radiology, 2005, 78, 587-595.	2.2	8
64	Stable, Intelligible Ultrasonic Strain Imaging. Ultrasound, 2008, 16, 187-192.	0.7	7
65	Initial clinical experience of an ultrasonic strain imaging system with novel noise-masking capability. British Journal of Radiology, 2010, 83, 702-706.	2.2	7
66	A New Method for the Acquisition of Ultrasonic Strain Image Volumes. Ultrasound in Medicine and Biology, 2011, 37, 434-441.	1.5	7
67	A normalization method for axial-shear strain elastography. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 2833-2838.	3.0	6
68	Ultrasonic imaging of 3D displacement vectors using a simulated 2D array and beamsteering. Ultrasonics, 2013, 53, 615-621.	3.9	6
69	Correction of Probe Pressure Artifacts in Freehand 3D Ultrasound. Lecture Notes in Computer Science, 2001, , 283-290.	1.3	6
70	Accurate fiducial location for freehand 3D ultrasound calibration. , 2007, , .		5
71	Real-time freehand 3D ultrasound calibration. , 2007, , .		5
72	Optimization strategies for ultrasound volume registration. Measurement Science and Technology, 2010, 21, 085803.	2.6	5

#	ARTICLE	IF	CITATIONS
73	Photoacoustic–ultrasonic dual-mode microscopy with local speed-of-sound estimation. Optics Letters, 2020, 45, 3840.	3.3	5
74	Volume Measurement in Sequential Freehand 3-D Ultrasound. Lecture Notes in Computer Science, 1999, , 70-83.	1.3	4
75	Non-planar Reslicing for Freehand 3D Ultrasound. Lecture Notes in Computer Science, 1999, , 716-725.	1.3	4
76	Sensorless Reconstruction of Freehand 3D Ultrasound Data. Lecture Notes in Computer Science, 2006, 9, 356-363.	1.3	4
77	Implementation of bubble sort and the odd-even transposition sort on a rack of transputers. Parallel Computing, 1987, 4, 345-348.	2.1	3
78	Body-centered visualisation for freehand 3-D ultrasound. Ultrasound in Medicine and Biology, 2000, 26, 539-550.	1.5	3
79	Speckle detection for 3D ultrasound. Ultrasonics, 2002, 40, 129-132.	3.9	3
80	Evaluation of a three-dimensional ultrasound localisation system incorporating probe pressure correction for use in partial breast irradiation. British Journal of Radiology, 2009, 82, 839-846.	2.2	3
81	A task-based analytical framework for ultrasonic beamformer comparison. Journal of the Acoustical Society of America, 2016, 140, 1048-1059.	1.1	3
82	Improvements to ultrasonic beamformer design and implementation derived from the task-based analytical framework. Journal of the Acoustical Society of America, 2017, 141, 4427-4437.	1.1	3
83	Multidirectional Scattering Models for 3-Dimensional Ultrasound Imaging. Journal of Ultrasound in Medicine, 2013, 32, 699-714.	1.7	3
84	Distance Measurement for Sensorless 3D US. Lecture Notes in Computer Science, 2004, , 1087-1088.	1.3	2
85	Deconvolution and elastography based on three-dimensional ultrasound. , 2008, , .		2
86	Real-time tools for freehand 3D ultrasound. Lecture Notes in Computer Science, 1998, , 1016-1023.	1.3	2
87	Minimum variance beamformers for coherent plane-wave compounding. , 2017, , .		1
88	Mean-Squared Error Beamforming for Coherent Plane-Wave Compounding. , 2019, , .		1
89	3D Elastography Using Freehand Ultrasound. Lecture Notes in Computer Science, 2004, , 1103-1104.	1.3	1
90	High-resolution ultrasound imaging using unified pixel-based and filtered delay multiply and sum beamforming. , 2021, , .		1

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91	â€˜Blade Runnerâ€™: A real-time speech recognizer. Concurrency and Computation: Practice and Experience, 1991, 3, 145-157.	0.5	0
92	<title>Volume measurement of large organs with 3D ultrasound</title>. , 2000, , .		0
93	Multidirectional Scattering Models for 3-Dimensional Ultrasound Imaging. Journal of Ultrasound in Medicine, 2013, 32, 699-714.	1.7	0
94	Freely Available Software for 3D RF Ultrasound. Lecture Notes in Computer Science, 2004, , 1099-1100.	1.3	0
95	A combination of pixel-based beamforming and Wiener filter to improve ultrasound image quality. , 2021, , .		0