

Kumaradevan Punithakumar

List of Publications by Year in descending order

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99
papers

1,566
citations

361296

20
h-index

360920

35
g-index

100
all docs

100
docs citations

100
times ranked

1486
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-Centre, Multi-Vendor and Multi-Disease Cardiac Segmentation: The M&Ms Challenge. IEEE Transactions on Medical Imaging, 2021, 40, 3543-3554.	5.4	168
2	Multiple-model probability hypothesis density filter for tracking maneuvering targets. IEEE Transactions on Aerospace and Electronic Systems, 2008, 44, 87-98.	2.6	128
3	ANHIR: Automatic Non-Rigid Histological Image Registration Challenge. IEEE Transactions on Medical Imaging, 2020, 39, 3042-3052.	5.4	75
4	Max-flow segmentation of the left ventricle by recovering subject-specific distributions via a bound of the Bhattacharyya measure. Medical Image Analysis, 2012, 16, 87-100.	7.0	72
5	Regional Assessment of Cardiac Left Ventricular Myocardial Function via MRI Statistical Features. IEEE Transactions on Medical Imaging, 2014, 33, 481-494.	5.4	71
6	An EM Algorithm for Nonlinear State Estimation With Model Uncertainties. IEEE Transactions on Signal Processing, 2008, 56, 921-936.	3.2	63
7	Automated thyroid nodule detection from ultrasound imaging using deep convolutional neural networks. Computers in Biology and Medicine, 2020, 122, 103871.	3.9	59
8	Left ventricle segmentation in MRI via convex relaxed distribution matching. Medical Image Analysis, 2013, 17, 1010-1024.	7.0	57
9	Graph Cuts with Invariant Object-Interaction Priors: Application to Intervertebral Disc Segmentation. Lecture Notes in Computer Science, 2011, 22, 221-232.	1.0	44
10	A GPU-Accelerated Deformable Image Registration Algorithm With Applications to Right Ventricular Segmentation. IEEE Access, 2017, 5, 20374-20382.	2.6	40
11	Regional heart motion abnormality detection: An information theoretic approach. Medical Image Analysis, 2013, 17, 311-324.	7.0	35
12	Alveolar Bone Segmentation in Intraoral Ultrasonographs with Machine Learning. Journal of Dental Research, 2020, 99, 1054-1061.	2.5	34
13	Multisensor deployment using PCRLBS, incorporating sensor deployment and motion uncertainties. IEEE Transactions on Aerospace and Electronic Systems, 2006, 42, 1474-1485.	2.6	33
14	Left Ventricle Segmentation via Graph Cut Distribution Matching. Lecture Notes in Computer Science, 2009, 12, 901-909.	1.0	32
15	A technique for semiautomatic segmentation of echogenic structures in 3D ultrasound, applied to infant hip dysplasia. International Journal of Computer Assisted Radiology and Surgery, 2016, 11, 31-42.	1.7	30
16	A sequential Monte Carlo probability hypothesis density algorithm for multitarget track-before-detect. , 2005, , .		28
17	Right ventricular segmentation in cardiac MRI with moving mesh correspondences. Computerized Medical Imaging and Graphics, 2015, 43, 15-25.	3.5	28
18	Graph cut segmentation with a global constraint: Recovering region distribution via a bound of the Bhattacharyya measure. , 2010, , .		27

#	ARTICLE	IF	CITATIONS
19	Multitarget Tracking using Probability Hypothesis Density Smoothing. IEEE Transactions on Aerospace and Electronic Systems, 2011, 47, 2344-2360.	2.6	26
20	Toward automated classification of acetabular shape in ultrasound for diagnosis of DDH: Contour alpha angle and the rounding index. Computer Methods and Programs in Biomedicine, 2016, 129, 89-98.	2.6	26
21	A Convex Max-Flow Approach to Distribution-Based Figure-Ground Separation. SIAM Journal on Imaging Sciences, 2012, 5, 1333-1354.	1.3	24
22	Distribution Matching with the Bhattacharyya Similarity: A Bound Optimization Framework. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 1777-1791.	9.7	23
23	Tracking Endocardial Motion Via Multiple Model Filtering. IEEE Transactions on Biomedical Engineering, 2010, 57, 2001-2010.	2.5	18
24	Fully automated left atrium segmentation from anatomical cine long-axis MRI sequences using deep convolutional neural network with unscented Kalman filter. Medical Image Analysis, 2021, 68, 101916.	7.0	18
25	Localization of cementoenamel junction in intraoral ultrasonographs with machine learning. Journal of Dentistry, 2021, 112, 103752.	1.7	18
26	Detection of Left Ventricular Motion Abnormality Via Information Measures and Bayesian Filtering. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 1106-1113.	3.6	17
27	Three-Dimensional Assessment of Temporomandibular Joint Using MRI-CBCT Image Registration. PLoS ONE, 2017, 12, e0169555.	1.1	16
28	Approximate Conditional Mean Particle Filtering for Linear/Nonlinear Dynamic State Space Models. IEEE Transactions on Signal Processing, 2008, 56, 5790-5803.	3.2	13
29	Quantification of circumferential, longitudinal, and radial global fractional shortening using steady-state free precession cines: A comparison with tissue tracking strain and application in fabry disease. Magnetic Resonance in Medicine, 2015, 73, 586-596.	1.9	12
30	Accuracy of magnetic resonance imaging cone beam computed tomography rigid registration of the head: an in-vitro study. Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2016, 121, 316-321.	0.2	12
31	Automated detection of pneumonia in lung ultrasound using deep video classification for COVID-19. Informatics in Medicine Unlocked, 2021, 25, 100687.	1.9	12
32	Multiview 3-D Echocardiography Fusion with Breath-Hold Position Tracking Using an Optical Tracking System. Ultrasound in Medicine and Biology, 2016, 42, 1998-2009.	0.7	11
33	Semiautomatic classification of acetabular shape from three-dimensional ultrasound for diagnosis of infant hip dysplasia using geometric features. International Journal of Computer Assisted Radiology and Surgery, 2017, 12, 439-447.	1.7	11
34	Toward automatic diagnosis of hip dysplasia from 2D ultrasound. , 2017, , .		11
35	Fully Automated Segmentation of Alveolar Bone Using Deep Convolutional Neural Networks from Intraoral Ultrasound Images. , 2019, 2019, 6632-6635.		11
36	Regional Heart Motion Abnormality Detection via Information Measures and Unscented Kalman Filtering. Lecture Notes in Computer Science, 2010, 13, 409-417.	1.0	11

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37	Vertebral Body Segmentation in MRI via Convex Relaxation and Distribution Matching. Lecture Notes in Computer Science, 2012, 15, 520-527.	1.0	11
38	Three-dimensional morphological changes of the temporomandibular joint and functional effects after mandibulotomy. Journal of Otolaryngology - Head and Neck Surgery, 2017, 46, 8.	0.9	10
39	Optimizing U-Net to Segment Left Ventricle from Magnetic Resonance Imaging. , 2018, , .		10
40	<title>Improved multi-target tracking using probability hypothesis density smoothing</title>. , 2007, , .		9
41	TUN-Det: A Novel Network for Thyroid Ultrasound Nodule Detection. Lecture Notes in Computer Science, 2021, , 656-667.	1.0	9
42	Automatic spinal cord segmentation from axial-view MRI slices using CNN with grayscale regularized active contour propagation. Computers in Biology and Medicine, 2021, 132, 104345.	3.9	9
43	<title>A multiple-model probability hypothesis density filter for tracking maneuvering targets</title>. , 2004, , .		8
44	Automated integration of facial and intra-oral images of anterior teeth. Computers in Biology and Medicine, 2020, 122, 103794.	3.9	8
45	Multiview echocardiography fusion using an electromagnetic tracking system. , 2016, 2016, 1078-1081.		7
46	Stereoscopic Display Is Superior to Conventional Display for Three-Dimensional Echocardiography of Congenital Heart Anatomy. Journal of the American Society of Echocardiography, 2020, 33, 1297-1305.	1.2	7
47	Assessment of Regional Myocardial Function via Statistical Features in MR Images. Lecture Notes in Computer Science, 2011, 14, 107-114.	1.0	7
48	Spline filter for multidimensional nonlinear/non-Gaussian Bayesian tracking. Proceedings of SPIE, 2008, , .	0.8	6
49	Cardiac ultrasound multiview fusion using a multicamera tracking system. , 2014, , .		6
50	Detecting left ventricular impaired relaxation in cardiac MRI using moving mesh correspondences. Computer Methods and Programs in Biomedicine, 2016, 124, 58-66.	2.6	6
51	Fully Automated Left Atrial Segmentation from MR Image Sequences Using Deep Convolutional Neural Network and Unscented Kalman Filter. , 2018, , .		6
52	Tracking tumor boundary using point correspondence for adaptive radio therapy. Computer Methods and Programs in Biomedicine, 2018, 165, 187-195.	2.6	6
53	Right Ventricular Segmentation from MRI Using Deep Convolutional Neural Networks. , 2019, 2019, 4020-4023.		6
54	Esophagus Segmentation in Computed Tomography Images Using a U-Net Neural Network With a Semiautomatic Labeling Method. IEEE Access, 2020, 8, 202459-202468.	2.6	6

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55	Thyroid Nodule Segmentation and Classification Using Deep Convolutional Neural Network and Rule-based Classifiers. , 2021, 2021, 3118-3121.		6
56	A GPU accelerated moving mesh correspondence algorithm with applications to RV segmentation. , 2015, 2015, 4206-9.		5
57	A Semi-Automated Method for Measurement of Left Ventricular Volumes in 3D Echocardiography. IEEE Access, 2018, 6, 16336-16344.	2.6	5
58	Real-Time Lung Tumor Tracking Using a CUDA Enabled Nonrigid Registration Algorithm for MRI. IEEE Journal of Translational Engineering in Health and Medicine, 2020, 8, 1-8.	2.2	5
59	Fully Automated Deep Learning Based Segmentation of Normal, Infarcted and Edema Regions from Multiple Cardiac MRI Sequences. Lecture Notes in Computer Science, 2020, , 82-91.	1.0	5
60	Regional Heart Motion Abnormality Detection via Multiview Fusion. Lecture Notes in Computer Science, 2012, 15, 527-534.	1.0	5
61	Interactive Data Driven Visualization for COVID-19 with Trends, Analytics and Forecasting. , 2020, , .		5
62	Patient movement compensation for 3D echocardiography fusion. , 2016, 2016, 1091-1094.		4
63	A Fully Convolutional Deep Neural Network for Lung Tumor Boundary Tracking in MRI. , 2018, 2018, 5906-5909.		4
64	A Deep Convolutional Neural Network Approach for the Segmentation of Cardiac Structures from MRI Sequences. Lecture Notes in Computer Science, 2021, , 250-258.	1.0	4
65	Blood Flow Manipulation in the Aorta With Coarctation and Arch Narrowing for Pediatric Subjects. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	1.1	4
66	Heart Motion Abnormality Detection via an Information Measure and Bayesian Filtering. Lecture Notes in Computer Science, 2009, 12, 373-380.	1.0	4
67	<title>Adaptive sensor placement for target tracking in the presence of uncertainties</title>. , 2003, , .		3
68	A distributed implementation of a sequential Monte Carlo probability hypothesis density filter for sensor networks. , 2006, , .		3
69	Cardiac right ventricular segmentation via point correspondence. , 2013, 2013, 4010-3.		3
70	Hip segmentation from MRI volumes in infants for DDH diagnosis and treatment planning. , 2016, 2016, 1046-1049.		3
71	Graph Cuts-based Segmentation of Alveolar Bone in Ultrasound Imaging. , 2018, , .		3
72	Computer-Assisted Detection of Cemento-Enamel Junction in Intraoral Ultrasonographs. Applied Sciences (Switzerland), 2021, 11, 5850.	1.3	3

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73	Multi-View 3-D Fusion Echocardiography: Enhancing Clinical Feasibility with a Novel Processing Technique. <i>Ultrasound in Medicine and Biology</i> , 2021, 47, 3090-3100.	0.7	3
74	A Convex Max-Flow Segmentation of LV Using Subject-Specific Distributions on Cardiac MRI. <i>Lecture Notes in Computer Science</i> , 2011, 22, 171-183.	1.0	3
75	Integrating User-Input into Deep Convolutional Neural Networks for Thyroid Nodule Segmentation. , 2021, 2021, 2637-2640.		3
76	Performance evaluations of multipath multitarget tracking using PCRLB. <i>Proceedings of SPIE</i> , 2011, , .	0.8	2
77	Lung tumor boundary tracking in MRI with moving mesh correspondences for adaptive radio therapy. , 2016, 2016, 1264-1267.		2
78	Spine labeling in MRI via regularized distribution matching. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2017, 12, 1911-1922.	1.7	2
79	Random Walker Framework for Sensor-Based Echocardiography Fusion. <i>IEEE Access</i> , 2018, 6, 8519-8525.	2.6	2
80	Multiview Three-Dimensional Echocardiography Image Fusion Using a Passive Measurement Arm. , 2018, 2018, 903-906.		2
81	A Novel 4D Semi-Automated Algorithm for Volumetric Segmentation in Echocardiography. , 2018, 2018, 1119-1122.		2
82	Registration of Ultrasound and CBCT Images for Enhancing Tooth-Periodontium Visualization: a Feasibility Study. , 2019, , .		2
83	Machine Learning and Graph Based Approach to Automatic Right Atrial Segmentation from Magnetic Resonance Imaging. , 2020, , .		2
84	A New Semi-automated Algorithm for Volumetric Segmentation of the Left Ventricle in Temporal 3D Echocardiography Sequences. <i>Cardiovascular Engineering and Technology</i> , 2021, , 1.	0.7	2
85	Cardiac MRI-Derived Myocardial Deformation Parameters Correlate with Pulmonary Valve Replacement Indications in Repaired Tetralogy of Fallot. <i>Pediatric Cardiology</i> , 2021, 42, 1805-1817.	0.6	2
86	3D Motion Estimation of Left Ventricular Dynamics Using MRI and Track-to-Track Fusion. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2020, 8, 1-9.	2.2	2
87	Multiview 3-D Echocardiography Image Fusion with Mutual Information Neural Estimation. , 2020, , .		2
88	Automated Segmentation of the Right Ventricle from Magnetic Resonance Imaging Using Deep Convolutional Neural Networks. <i>Lecture Notes in Computer Science</i> , 2022, , 344-351.	1.0	2
89	A training-free recursive multiresolution framework for diffeomorphic deformable image registration. <i>Applied Intelligence</i> , 2022, 52, 12546-12555.	3.3	2
90	Parallel implementation of a nonrigid image registration algorithm for lung tumor boundary tracking in quasi real-time MRI. , 2017, 2017, 325-328.		1

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91	Validation of a diffeomorphic registration algorithm using true deformation computed from thin plate spline interpolation. , 2020, 2020, 1351-1354.		1
92	The implications of two outlet boundary conditions on blood flow simulations in normal aorta of pediatric subjects. Theoretical and Computational Fluid Dynamics, 2021, 35, 419-436.	0.9	1
93	Integrated bias removal in passive radar systems. Proceedings of SPIE, 2008, , .	0.8	0
94	A neural network learned information measures for heart motion abnormality detection. , 2011, , .		0
95	Detecting left ventricular impaired relaxation using MR imaging. , 2014, , .		0
96	Validation of Diffeomorphic Registration on Cine Cardiac MR via Direct Frame-to-Frame Comparison with HARP Tracking on Tagged MR. , 2020, 2020, 1174-1177.		0
97	Tracking Endocardial Boundary and Motion via Graph Cut Distribution Matching and Multiple Model Filtering. Lecture Notes in Computer Science, 2010, , 172-182.	1.0	0
98	Adapting Texture Compression to Perceptual Quality Metric for Textured 3D Models. Lecture Notes in Computer Science, 2018, , 397-405.	1.0	0
99	The impact of color coding in Virtual Reality navigation tasks. , 2020, , .		0