Raja Muthupillai

List of Publications by Year
in descending order

92 papers	6,069 citations	159585 30 h-index	71685 76 g-index
98 all docs	98 docs citations	98 times ranked	6967 citing authors

#	Article	IF	Citations
1	Magnetic Resonance Elastography by Direct Visualization of Propagating Acoustic Strain Waves. Science, 1995, 269, 1854-1857.	12.6	1,879
2	Geometrical confinement of gadolinium-based contrast agents in nanoporous particles enhances T1 contrast. Nature Nanotechnology, 2010, 5, 815-821.	31.5	379
3	Magnetic resonance elastography of skeletal muscle. Journal of Magnetic Resonance Imaging, 2001, 13, 269-276.	3.4	271
4	Magnetic resonance elastography. Nature Medicine, 1996, 2, 601-603.	30.7	233
5	Magnetic resonance imaging of transverse acoustic strain waves. Magnetic Resonance in Medicine, 1996, 36, 266-274.	3.0	231
6	Normal Values for Renal Length and Volume as Measured by Magnetic Resonance Imaging. Clinical Journal of the American Society of Nephrology: CJASN, 2007, 2, 38-45.	4.5	203
7	Prognostic Significance of Delayed-Enhancement Magnetic Resonance Imaging. Circulation, 2009, 120, 2069-2076.	1.6	202
8	FLAIR histogram segmentation for measurement of leukoaraiosis volume. Journal of Magnetic Resonance Imaging, 2001, 14, 668-676.	3.4	152
9	Implications of SENSE MR in routine clinical practice. European Journal of Radiology, 2003, 46, 3-27.	2.6	148
10	Gadonanotubes as Ultrasensitive pH-Smart Probes for Magnetic Resonance Imaging. Nano Letters, 2008, 8, 415-419.	9.1	133
11	Automated Left Ventricular Segmentation in Cardiac MRI. IEEE Transactions on Biomedical Engineering, 2006, 53, 1425-1428.	4.2	132
12	Assessing Myocardial Viability and Infarct Transmurality With Left Ventricular Electromechanical Mapping in Patients With Stable Coronary Artery Disease. Circulation, 2002, 106, 957-961.	1.6	131
13	Clinical validation of free breathing respiratory triggered retrospectively cardiac gated cine balanced steady-state free precession cardiovascular magnetic resonance in sedated children. Journal of Cardiovascular Magnetic Resonance, 2015, 17, 1.	3.3	111
14	Exenatide decreases hepatic fibroblast growth factor 21 resistance in non-alcoholic fatty liver disease in a mouse model of obesity and in a randomised controlled trial. Diabetologia, 2011, 54, 3093-3100.	6.3	102
15	Clinical Features and Usefulness of Cardiac Magnetic Resonance Imaging in Assessing Myocardial Viability and Prognosis in Takotsubo Cardiomyopathy (Transient Left Ventricular Apical Ballooning) Tj ETQq1 1 0.784314 rgBT /Overlock	3.3	95
16	Effects of Combined Exenatide and Pioglitazone Therapy on Hepatic Fat Content in Type 2 Diabetes. Obesity, 2011, 19, 2310-2315.	3.0	89
17	Acoustic shear-wave imaging using echo ultrasound compared to magnetic resonance elastography. Ultrasound in Medicine and Biology, 2000, 26, 397-403.	1.5	76
18	Gadofullerenes as nanoscale magnetic labels for cellular MRI. Contrast Media and Molecular Imaging, 2007, 2, 139-146.	0.8	71

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19	High-Risk Cardiovascular Conditions in Sports-Related Sudden Death: Prevalence in 5,169 Schoolchildren Screened via Cardiac Magnetic Resonance. Texas Heart Institute Journal, 2018, 45, 205-213.	0.3	68
20	Localization and Segmentation of Left Ventricle in Cardiac Cine-MR Images. IEEE Transactions on Biomedical Engineering, 2009, 56, 1360-1370.	4.2	65
21	Gadonanotubes as magnetic nanolabels for stem cell detection. Biomaterials, 2010, 31, 9482-9491.	11.4	65
22	Parallel Imaging in MR Angiography. Topics in Magnetic Resonance Imaging, 2004, 15, 169-185.	1.2	59
23	<title>Image processing for magnetic-resonance elastography</title>. , 1996, , .		55
24	Magnetic resonance imaging of myocardial fibrosis in hypertrophic cardiomyopathy. Texas Heart Institute Journal, 2002, 29, 176-80.	0.3	54
25	Time-resolved contrast-enhanced magnetic resonance angiography in pediatric patients using sensitivity encoding. Journal of Magnetic Resonance Imaging, 2003, 17, 559-564.	3.4	53
26	Acute Myocardial Infarction: Tissue Characterization with T1Ï•weighted MR Imagingâ€"Initial Experience. Radiology, 2004, 232, 606-610.	7.3	49
27	Evaluation of Cell Therapy on Exercise Performance and Limb Perfusion in Peripheral Artery Disease. Circulation, 2017, 135, 1417-1428.	1.6	46
28	Enhanced MRI relaxivity of aquated Gd³⁺ ions by carboxyphenylated water-dispersed graphene nanoribbons. Nanoscale, 2014, 6, 3059-3063.	5.6	43
29	Usefulness of real-time navigator magnetic resonance imaging for evaluating coronary artery origins in pediatric patients. American Journal of Cardiology, 2005, 95, 679-682.	1.6	42
30	Magnetic Resonance Imagingâ€"guided Volumetric Ablation of Symptomatic Leiomyomata: Correlation of Imaging with Histology. Journal of Vascular and Interventional Radiology, 2012, 23, 786-794.e4.	0.5	42
31	Fast 3D Cine Steady-State Free Precession Imaging with Sensitivity Encoding for Assessment of Left Ventricular Function in a Single Breath-Hold. American Journal of Roentgenology, 2006, 187, 1235-1239.	2.2	39
32	Magnetic Resonance Imagingâ€"Based Screening Study in a General Population of Adolescents. Journal of the American College of Cardiology, 2018, 71, 579-580.	2.8	34
33	Coronary artery magnetic resonance angiography. Journal of Magnetic Resonance Imaging, 2004, 19, 686-709.	3.4	33
34	Evaluation of a Subject specific dual-transmit approach for improving B1 field homogeneity in cardiovascular magnetic resonance at 3T. Journal of Cardiovascular Magnetic Resonance, 2013, 15, 68.	3.3	29
35	Coronary artery calcium scoring: an evidenceâ€based guide for primary care physicians. Journal of Internal Medicine, 2021, 289, 309-324.	6.0	29
36	High temporal resolution SSFP cine MRI for estimation of left ventricular diastolic parameters. Journal of Magnetic Resonance Imaging, 2010, 31, 872-880.	3.4	27

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37	4D Contrast-enhanced MR Angiography with the Keyhole Technique in Children: Technique and Clinical Applications. Radiographics, 2016, 36, 523-537.	3.3	27
38	Evaluation of cardiac biventricular segmentation from multiaxis MRI data: A multicenter study. Journal of Magnetic Resonance Imaging, 2008, 28, 626-636.	3.4	26
39	Quantitative Assessment of Left Ventricular Function: Steady-State Free Precession MR Imaging with or without Sensitivity Encoding. Radiology, 2005, 235, 1031-1035.	7.3	25
40	Surfactant-free Gd³⁺-ion-containing carbon nanotube MRI contrast agents for stem cell labeling. Nanoscale, 2015, 7, 12085-12091.	5.6	24
41	Tools for cardiovascular magnetic resonance imaging. Cardiovascular Diagnosis and Therapy, 2014, 4, 104-25.	1.7	24
42	Evaluation of myocardial iron overload by T2* cardiovascular magnetic resonance imaging. Texas Heart Institute Journal, 2005, 32, 448-9.	0.3	24
43	MRI measurement of hepatic magnetic susceptibility?Phantom validation and normal subject studies. Magnetic Resonance in Medicine, 2004, 52, 1318-1327.	3.0	23
44	Automatic identification of the left ventricle in cardiac cine-MR images: Dual-contrast cluster analysis and scout-geometry approaches. Journal of Magnetic Resonance Imaging, 2006, 23, 641-651.	3.4	23
45	Application of SENSE in Clinical Pediatric Body MR Imaging. Topics in Magnetic Resonance Imaging, 2004, 15, 187-196.	1.2	22
46	Nitroxide Radicals@USâ€Tubes: New Spin Labels for Biomedical Applications. Advanced Functional Materials, 2012, 22, 3691-3698.	14.9	21
47	Utilizing SENSE to reduce scan duration in high-resolution contrast-enhanced renal MR angiography. Journal of Magnetic Resonance Imaging, 2006, 24, 873-879.	3.4	18
48	Assessment of cardiac iron by MRI susceptometry and R2* in patients with thalassemia. Magnetic Resonance Imaging, 2010, 28, 363-371.	1.8	17
49	Two-center clinical validation and quantitative assessment of respiratory triggered retrospectively cardiac gated balanced-SSFP cine cardiovascular magnetic resonance imaging in adults. Journal of Cardiovascular Magnetic Resonance, 2018, 20, 44.	3.3	17
50	Nephrogenic systemic fibrosis: a concise review for cardiologists. Texas Heart Institute Journal, 2010, 37, 508-15.	0.3	17
51	Direct comparison of sensitivity encoding (SENSE) accelerated and conventional 3D contrast enhanced magnetic resonance angiography (CEâ€MRA) of renal arteries: Effect of increasing spatial resolution. Journal of Magnetic Resonance Imaging, 2010, 31, 149-159.	3.4	16
52	An orthogonal correlation algorithm for ghost reduction in MRI. Magnetic Resonance in Medicine, 1997, 38, 678-686.	3.0	13
53	Tissue characterization of myocardial infarction using T1Ï: Influence of contrast dose and time of imaging after contrast administration. Journal of Magnetic Resonance Imaging, 2006, 24, 1040-1046.	3.4	13
54	Automatic computation of left ventricular ejection fraction from spatiotemporal information in cineâ€SSFP cardiac MR images. Journal of Magnetic Resonance Imaging, 2008, 28, 39-50.	3.4	13

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55	Safety of gadoversetamide in patients with acute and chronic myocardial infarction. Journal of Magnetic Resonance Imaging, 2008, 28, 1368-1378.	3.4	13
56	Volumetric MRIâ€guided highâ€intensity focused ultrasound for noninvasive, in vivo determination of tissue thermal conductivity: Initial experience in a pig model. Journal of Magnetic Resonance Imaging, 2013, 37, 950-957.	3.4	13
57	Baseline assessment and comparison of arterial anatomy, hyperemic flow, and skeletal muscle perfusion in peripheral artery disease: The Cardiovascular Cell Therapy Research Network â€œPatients with Intermittent Claudication Injected with ALDH Bright Cellsâ€•(CCTRN PACE) study. American Heart Journal, 2017, 183, 24-34.	2.7	13
58	We Have Plenty of Reasons to Propose New, Updated Policies for Preventing Sudden Cardiac Death in Young Athletes. Journal of the American Heart Association, 2020, 9, e014368.	3.7	13
59	SENSE or k-MAG to Accelerate Free Breathing Navigator-Guided Coronary MR Angiography. American Journal of Roentgenology, 2006, 186, 1669-1675.	2.2	11
60	Pediatric Body MR Angiography. Magnetic Resonance Imaging Clinics of North America, 2009, 17, 133-144.	1.1	11
61	Noninvasive, in vivo determination of uterine fibroid thermal conductivity in MRIâ€guided high intensity focused ultrasound therapy. Journal of Magnetic Resonance Imaging, 2015, 41, 1654-1661.	3.4	11
62	Shortâ€Term Repeatability of Magnetic Resonance Elastography at 3.0T: Effects of Motionâ€Encoding Gradient Direction, Slice Position, and Meal Ingestion. Journal of Magnetic Resonance Imaging, 2016, 43, 704-712.	3.4	10
63	Cardiac sarcoidosis detected by delayed-hyperenhancement magnetic resonance imaging. Texas Heart Institute Journal, 2004, 31, 99-102.	0.3	10
64	Detection of Active Coronary Arterial Vasculitis Using Magnetic Resonance Imaging in Kawasaki Disease. Circulation, 2005, 112, .	1.6	9
65	Non-contrast Computed Tomography is Comparable to Contrast-enhanced Computed Tomography for Aortic Volume Analysis after Endovascular Abdominal Aortic Aneurysm Repair. European Journal of Vascular and Endovascular Surgery, 2011, 41, 460-466.	1.5	9
66	Assessment of perfusion and wall-motion abnormalities and transient ischemic dilation in regadenoson stress cardiac magnetic resonance perfusion imaging. International Journal of Cardiovascular Imaging, 2014, 30, 949-957.	1.5	9
67	Reconstruction of elasticity and attenuation maps in shear wave imaging: An inverse approach. Lecture Notes in Computer Science, 1998, , 606-613.	1.3	8
68	A New High-Performance Gadonanotube-Polymer Hybrid Material for Stem Cell Labeling and Tracking by MRI. Contrast Media and Molecular Imaging, 2018, 2018, 1-8.	0.8	8
69	Imaging elastic properties of tissue. , 0, , .		8
70	The detection of normal, ischemic and infarcted myocardial tissue using MRI. International Congress Series, 2003, 1256, 1153-1158.	0.2	7
71	Rapid assessment of regional and global left ventricular function using three-dimensional k-t BLAST imaging. Magnetic Resonance Imaging, 2008, 26, 727-738.	1.8	7
72	Young athletes: Preventing sudden death by adopting a modern screening approach? A critical review and the opening of a debate. IJC Heart and Vasculature, 2021, 34, 100790.	1.1	7

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73	Left Ventricular Segmentation in MR Using Hierarchical Multi-class Multi-feature Fuzzy Connectedness. Lecture Notes in Computer Science, 2004, , 402-410.	1.3	7
74	Biventricular takotsubo cardiomyopathy: cardiac magnetic resonance imaging as useful diagnostic tool. Texas Heart Institute Journal, 2011, 38, 88-9.	0.3	7
75	Segmented spin-echo pulses to increase fMRI signal: Repeated intrinsic diffusional enhancement. Magnetic Resonance in Medicine, 1999, 42, 631-635.	3.0	6
76	Free breathing high temporal resolution time resolved contrast enhanced MRA (4D MRA) at high heart rates using keyhole SENSE CENTRA in congenital heart disease. Journal of Cardiovascular Magnetic Resonance, 2010, 12, .	3.3	6
77	High frame rate cardiac cine MRI for the evaluation of diastolic function and its direct correlation with echocardiography. Journal of Magnetic Resonance Imaging, 2019, 50, 1571-1582.	3.4	6
78	Gadolinium-Based Contrast Agents: Updates and Answers to Typical Questions Regarding Gadolinium Use. Texas Heart Institute Journal, 2022, 49, .	0.3	6
79	Images in cardiovascular medicine. Detection of active coronary arterial vasculitis using magnetic resonance imaging in Kawasaki disease. Circulation, 2005, 112, e315-6.	1.6	5
80	<title>Inverse approach to the calculation of elasticity maps for magnetic resonance elastography</title>. , 1998, , .		4
81	Comparison of Low-Dose Higher-Relaxivity and Standard-Dose Lower-Relaxivity Contrast Media for Delayed-Enhancement MRI: A Blinded Randomized Crossover Study. American Journal of Roentgenology, 2015, 205, 533-539.	2.2	4
82	Clinical validation of free breathing Respiratory Triggered Retrospectively Cardiac Gated Cine Steady-State Free Precession (RT-SSFP) imaging in sedated children. Journal of Cardiovascular Magnetic Resonance, 2013, 15, .	3.3	2
83	Mitral Valve Flow and Myocardial Motion Assessed with Dual-Echo Dual-Velocity Cardiac MRI. Radiology: Cardiothoracic Imaging, 2020, 2, e190126.	2.5	2
84	High resolution imaging of the right ventricle using ZOOM MRI. Journal of Cardiovascular Magnetic Resonance, 2010, 12, .	3.3	1
85	Multidetector Computed Tomography Angiography (MDCT) in the Pre-Procedural Assessment of Patients Undergoing Transcatheter Aortic Valve Replacement. Eurasian Journal of Medicine, 2020, 52, 86-93.	0.6	1
86	Feasibility and validation of estimating Global LV functional indices from limited projections using a Modified Simpson's Algorithm. Journal of Cardiovascular Magnetic Resonance, 2010, 12, .	3.3	0
87	Ultrafast in-line computation of ejection fraction from cardiac cine steady-state free precession (SSFP) images. Journal of Cardiovascular Magnetic Resonance, 2010, 12, .	3.3	0
88	Ultrafast computation of left ventricular ejection fraction using temporal intensity variation in cine steady-state free precession cardiac MR images with or without contrast. Journal of Cardiovascular Magnetic Resonance, 2016, 18, O85.	3.3	0
89	Effect of respiratory suspension on the computation of volume-based early peak filling rate to late peak filling rate ratio. Journal of Cardiovascular Magnetic Resonance, 2016, 18, O93.	3.3	0
90	Tissue characterization of uterine fibroids with an intravoxel incoherent motion model: The need for T₂ correction. Journal of Magnetic Resonance Imaging, 2018, 48, 994-1001.	3.4	0

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91	NON-COMPACTION LEFT VENTRICLE: NOVEL RESULTS OF SUBTLE MRI SUB-ANALYSIS. Journal of the American College of Cardiology, 2019, 73, 593.	2.8	0
92	Ultrafast Computation of Left Ventricular Ejection Fraction by Using Temporal Intensity Variation in Cine Cardiac Magnetic Resonance. Texas Heart Institute Journal, 2021, 48, .	0.3	0