Richard M Leahy

List of Publications by Year
in descending order

128 papers	8,322 citations	172457 29 h-index	71685 76 g-index
132 all docs	132 docs citations	132 times ranked	8613 citing authors

#	Article	IF	Citations
1	Brainstorm: A User-Friendly Application for MEG/EEG Analysis. Computational Intelligence and Neuroscience, 2011, 2011, 1-13.	1.7	2,564
2	Magnetic Resonance Image Tissue Classification Using a Partial Volume Model. NeuroImage, 2001, 13, 856-876.	4.2	866
3	BrainSuite: An automated cortical surface identification tool. Medical Image Analysis, 2002, 6, 129-142.	11.6	727
4	High-resolution 3D Bayesian image reconstruction using the microPET small-animal scanner. Physics in Medicine and Biology, 1998, 43, 1001-1013.	3.0	580
5	Iterative reconstruction techniques in emission computed tomography. Physics in Medicine and Biology, 2006, 51, R541-R578.	3.0	319
6	Coherent neural representation of hand speed in humans revealed by MEG imaging. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7676-7681.	7.1	252
7	A comparison of random field theory and permutation methods for the statistical analysis of MEG data. NeuroImage, 2005, 25, 383-394.	4.2	191
8	Statistical approaches in quantitative positron emission tomography. Statistics and Computing, 2000, 10, 147-165.	1.5	176
9	Surface-Constrained Volumetric Brain Registration Using Harmonic Mappings. IEEE Transactions on Medical Imaging, 2007, 26, 1657-1669.	8.9	136
10	A fingerprint of the epileptogenic zone in human epilepsies. Brain, 2018, 141, 117-131.	7.6	136
11	Optimization and performance evaluation of the microPET II scanner forin vivosmall-animal imaging. Physics in Medicine and Biology, 2004, 49, 2527-2545.	3.0	135
12	MEG/EEG Group Analysis With Brainstorm. Frontiers in Neuroscience, 2019, 13, 76.	2.8	135
13	An Evaluation of Methods for Neuromagnetic Image Reconstruction. IEEE Transactions on Biomedical Engineering, 1987, BME-34, 713-723.	4.2	131
14	Comparison of landmark-based and automatic methods for cortical surface registration. NeuroImage, 2010, 49, 2479-2493.	4.2	121
15	Non-Local Means Denoising of Dynamic PET Images. PLoS ONE, 2013, 8, e81390.	2.5	115
16	PET Image Reconstruction Using Information Theoretic Anatomical Priors. IEEE Transactions on Medical Imaging, 2011, 30, 537-549.	8.9	96
17	Magnetic Resonance-Guided Positron Emission Tomography Image Reconstruction. Seminars in Nuclear Medicine, 2013, 43, 30-44.	4.6	92
18	Co-registration and distortion correction of diffusion and anatomical images based on inverse contrast normalization. NeuroImage, 2015, 115, 269-280.	4.2	90

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19	Childhood Music Training Induces Change in Micro and Macroscopic Brain Structure: Results from a Longitudinal Study. Cerebral Cortex, 2018, 28, 4336-4347.	2.9	84
20	Identifying true cortical interactions in MEG using the nulling beamformer. NeuroImage, 2010, 49, 3161-3174.	4.2	78
21	Generic head models for atlas-based EEG source analysis. Human Brain Mapping, 2006, 27, 129-143.	3.6	74
22	Loneliness and meaning in life are reflected in the intrinsic network architecture of the brain. Social Cognitive and Affective Neuroscience, 2019, 14, 423-433.	3.0	61
23	Patlak Image Estimation From Dual Time-Point List-Mode PET Data. IEEE Transactions on Medical Imaging, 2014, 33, 913-924.	8.9	54
24	Analysis of Resolution and Noise Properties of Nonquadratically Regularized Image Reconstruction Methods for PET. IEEE Transactions on Medical Imaging, 2008, 27, 413-424.	8.9	52
25	Connectivity of the human insula: A cortico-cortical evoked potential (CCEP) study. Cortex, 2019, 120, 419-442.	2.4	49
26	A Method for Automated Cortical Surface Registration and Labeling. Lecture Notes in Computer Science, 2012, 7359, 180-189.	1.3	41
27	How age of acquisition influences brain architecture in bilinguals. Journal of Neurolinguistics, 2015, 36, 35-55.	1.1	40
28	An equal start: absence of group differences in cognitive, social, and neural measures prior to music or sports training in children. Frontiers in Human Neuroscience, 2014, 8, 690.	2.0	39
29	Accurate Estimation of the Fisher Information Matrix for the PET Image Reconstruction Problem. IEEE Transactions on Medical Imaging, 2004, 23, 1057-1064.	8.9	34
30	Semi-automated method for delineation of landmarks on models of the cerebral cortex. Journal of Neuroscience Methods, 2009, 178, 385-392.	2.5	33
31	Cortical surface parameterization by p-harmonic energy minimization. , 2004, 1, 428-431.		32
32	Are you thinking what I'm thinking? Synchronization of resting fMRI time-series across subjects. NeuroImage, 2018, 172, 740-752.	4.2	32
33	Age differences in the functional architecture of the human brain. Cerebral Cortex, 2022, 33, 114-134.	2.9	31
34	Altered Structural and Functional Connectivity in Late Preterm Preadolescence: An Anatomic Seed-Based Study of Resting State Networks Related to the Posteromedial and Lateral Parietal Cortex. PLoS ONE, 2015, 10, e0130686.	2.5	30
35	Exact and approximate Fourier rebinning of PET data from time-of-flight to non time-of-flight. Physics in Medicine and Biology, 2009, 54, 467-484.	3.0	29
36	Hemoglobin and mean platelet volume predicts diffuse T1-MRI white matter volume decrease in sickle cell disease patients. NeuroImage: Clinical, 2017, 15, 239-246.	2.7	29

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37	Anemia predicts lower white matter volume and cognitive performance in sickle and nonâ€sickle cell anemia syndrome. American Journal of Hematology, 2019, 94, 1055-1065.	4.1	28
38	Temporal Non-Local Means Filtering Reveals Real-Time Whole-Brain Cortical Interactions in Resting fMRI. PLoS ONE, 2016, 11, e0158504.	2.5	27
39	Learning to define an electrical biomarker of the epileptogenic zone. Human Brain Mapping, 2020, 41, 429-441.	3.6	25
40	Linear transforms for Fourier data on the sphere: Application to high angular resolution diffusion MRI of the brain. NeuroImage, 2013, 71, 233-247.	4.2	23
41	Improved B₀â€distortion correction in diffusion MRI using interlaced qâ€space sampling and constrained reconstruction. Magnetic Resonance in Medicine, 2014, 72, 1218-1232.	3.0	22
42	A Framework for Registration, Statistical Characterization and Classification of Cortically Constrained Functional Imaging Data. Lecture Notes in Computer Science, 2005, 19, 186-196.	1.3	20
43	A novel ANCOVA design for analysis of MEG data with application to a visual attention studyâ˜†. NeuroImage, 2009, 44, 164-174.	4.2	19
44	Sulcal set optimization for cortical surface registration. NeuroImage, 2010, 50, 950-959.	4.2	19
45	Alterations of resting state networks and structural connectivity in relation to the prefrontal and anterior cingulate cortices in late prematurity. NeuroReport, 2015, 26, 22-26.	1.2	19
46	A hybrid high-resolution anatomical MRI atlas with sub-parcellation of cortical gyri using resting fMRI. Journal of Neuroscience Methods, 2022, 374, 109566.	2.5	19
47	A comparison of seven different DTI-derived estimates of corticospinal tract structural characteristics in chronic stroke survivors. Journal of Neuroscience Methods, 2018, 304, 66-75.	2.5	18
48	Integrated open-source software for multiscale electrophysiology. Scientific Data, 2019, 6, 231.	5.3	18
49	Geodesic curvature flow on surfaces for automatic sulcal delineation. , 2012, 2012, 430-433.		14
50	Automated MRI Volumetric Analysis in Patients with Rasmussen Syndrome. American Journal of Neuroradiology, 2016, 37, 2348-2355.	2.4	13
51	Temporal non-local means filtering for studies of intrinsic brain connectivity from individual resting fMRI. Medical Image Analysis, 2020, 61, 101635.	11.6	13
52	Detection of eventâ€related modulations of oscillatory brain activity with multivariate statistical analysis of MEG data. Human Brain Mapping, 2009, 30, 1922-1934.	3.6	12
53	Childhood EEG frontal alpha power as a predictor of adolescent antisocial behavior: A twin heritability study. Biological Psychology, 2015, 105, 72-76.	2.2	11
54	A Network-Based Approach to Study of Adhd Using Tensor Decomposition of Resting State Fmri Data. , 2020, 2020, 544-548.		11

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55	Brain Lesion Detection Using A Robust Variational Autoencoder and Transfer Learning. , 2020, 2020, 786-790.		11
56	Correcting Susceptibility-Induced Distortion in Diffusion-Weighted MRI using Constrained Nonrigid Registration. , 2012, 2012, .		11
57	A robust variational autoencoder using beta divergence. Knowledge-Based Systems, 2022, 238, 107886.	7.1	11
58	Canonical granger causality between regions of interest. NeuroImage, 2013, 83, 189-199.	4.2	10
59	To cut or not to cut? Assessing the modular structure of brain networks. NeuroImage, 2014, 91, 99-108.	4.2	10
60	Global PDF-based temporal non-local means filtering reveals individual differences in brain connectivity. , 2018, 2018, 15-19.		10
61	Heterotopia or overlaying cortex: What about in-between?. Epilepsy & Behavior Case Reports, 2019, 11, 4-9.	1.5	10
62	Scalable and Robust Tensor Decomposition of Spontaneous Stereotactic EEG Data. IEEE Transactions on Biomedical Engineering, 2019, 66, 1549-1558.	4.2	10
63	Regionâ€optimized virtual (ROVir) coils: Localization and/or suppression of spatial regions using sensorâ€domain beamforming. Magnetic Resonance in Medicine, 2021, 86, 197-212.	3.0	10
64	Robust identification of partial-correlation based networks with applications to cortical thickness data. , 2012, 2012, 1551-1554.		9
65	Correcting inhomogeneity-induced distortion in FMRI using non-rigid registration. , 2015, 2015, 1364-1367.		9
66	Functional Imaging of Brain Activity and Connectivity with MEG. Understanding Complex Systems, 2007, , 201-219.	0.6	9
67	PET IMAGE RECONSTRUCTION USING ANATOMICAL INFORMATION THROUGH MUTUAL INFORMATION BASED PRIORS: A SCALE SPACE APPROACH. , 2007, , .		8
68	Mutual information based non-rigidmouse registration using a scale-space approach. , 2008, , .		8
69	<title>PET image reconstruction incorporating anatomical information using segmented regression</title>. , 1997, 3034, 381.		7
70	Robust brain network identification from multi-subject asynchronous fMRI data. NeuroImage, 2021, 227, 117615.	4.2	7
71	Group-wise alignment of resting fMRI in space and time. , 2019, , .		7
72	Computer Simulated Studies of Tomographic Reconstruction with an Electronically Collimated Camera for SPECT. IEEE Transactions on Nuclear Science, 1987, 34, 369-373.	2.0	6

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73	Assessing statistical significance when partitioning large-scale brain networks. , 2012, , .		6
74	Dual-time-point Patlak estimation from list mode PET data. , 2012, , .		6
75	Parameter selection for optimized non-local means filtering of task fMRI. , 2017, , .		6
76	Wholeâ€body parametric PET imaging will replace conventional imageâ€derived PET metrics in clinical oncology. Medical Physics, 2018, 45, 5355-5358.	3.0	6
77	Validation of semiâ€automated anatomically labeled SEEG contacts in a brain atlas for mapping connectivity in focal epilepsy. Epilepsia Open, 2021, 6, 493-503.	2.4	6
78	Kernel Methods for Riemannian Analysis of Robust Descriptors of the Cerebral Cortex. Lecture Notes in Computer Science, 2017, 10265, 28-40.	1.3	6
79	A FINITE ELEMENT METHOD FOR ELASTIC PARAMETERIZATION AND ALIGNMENT OF CORTICAL SURFACES USING SULCAL CONSTRAINTS. , 2007, , .		5
80	Direct estimation of patlak parameters from list mode PET data. , 2009, , .		5
81	The FAST graph: A novel framework for the anatomically-guided visualization and analysis of cortico-cortical evoked potentials. Epilepsy Research, 2020, 161, 106264.	1.6	5
82	Effective connectivity differs between focal cortical dysplasia types I and II. Epilepsia, 2021, 62, 2753-2765.	5.1	5
83	Statistically optimal graph partition method based on modularity. , 2010, , .		4
84	Estimation of gap data using bow-tie filters for 3D time-of-flight PET. , 2010, , .		4
85	Statistically optimal modular partitioning of directed graphs. , 2010, , .		4
86	Spatially varying regularization for motion compensated PET reconstruction. , 2012, , .		4
87	EEG for Current With Two-Dimensional Support. IEEE Transactions on Biomedical Engineering, 2018, 65, 2101-2108.	4.2	4
88	Non-rigid Image Registration Using Gaussian Mixture Models. Lecture Notes in Computer Science, 2012, 7359, 286-295.	1.3	4
89	Partitioning directed graphs based on modularity and information flow. , 2011, , .		3
90	Robust tensor decomposition of resting brain networks in stereotactic EEG. , 2017, , .		3

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91	Riemannian Statistical Analysis of Cortical Geometry with Robustness to Partial Homology and Misalignment. Lecture Notes in Computer Science, 2016, 9900, 237-246.	1.3	3
92	Predicting cognitive scores from resting fMRI data and geometric features of the brain. , 2019, 10949, .		3
93	FAST IMAGE RECONSTRUCTION METHODS FOR FULLY 3D MULTISPECTRAL OPTICAL BIOLUMINESCENCE TOMOGRAPHY. , 2007, , .		2
94	EXPLORING HUMAN VISUAL ATTENTION IN AN MEG STUDY OF A SPATIAL CUEING PARADIGM USING A NOVEL ANCOVA DESIGN. , 2007, , .		2
95	Registration of cortical surfaces using sulcal landmarks for group analysis of MEG data. International Congress Series, 2007, 1300, 229-232.	0.2	2
96	Controlling Familywise Error Rate for Matched Subspace Detection in Dynamic FDG PET. IEEE Transactions on Medical Imaging, 2009, 28, 1623-1631.	8.9	2
97	Constrained mixture modeling for the estimation of kinetic parameters in dynamic PET. , 2012, , .		2
98	Small animal PET with a clinical PET/CT: Optimizing image quality with MAP reconstruction and super-resolution. , 2012, , .		2
99	Phase synchrony in multivariate Gaussian data with applications to cortical networks. , 2012, , .		2
100	Brain network identification in asynchronous task fMRI data using robust and scalable tensor decomposition. , 2019, , .		2
101	Exploring Anemia's Impact on Brain Microstructure, Volume, Functional Connectivity, Iron and Cognitive Performance. Blood, 2019, 134, 3553-3553.	1.4	2
102	BrainSync: An Orthogonal Transformation forÂSynchronization of fMRI Data AcrossÂSubjects. Lecture Notes in Computer Science, 2017, 10433, 486-494.	1.3	2
103	Neuroanatomic Markers of Posttraumatic Epilepsy Based on MR Imaging and Machine Learning. American Journal of Neuroradiology, 2022, 43, 347-353.	2.4	2
104	Analysis of Region of Interest Quantification for PET Image Reconstruction with Selective Regularization. , 2006, , .		1
105	Spatial distortion correction and crystal identification for position-sensitive avalanche photodiode-based PET scanners. , 2008, , .		1
106	Optimized weighting for Fourier rebinning of three-dimensional time-of-Flight PET data to non-time-of-flight. , 2009, , .		1
107	Kinetic parameters estimation for heterogeneous tumor model. , 2009, , .		1
108	Fast GPU-based time-of-flight MAP reconstruction with a factored system matrix. , 2010, , .		1

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109	Viability of sharing MEG data using minimum-norm imaging. Proceedings of SPIE, 2011, , .	0.8	1
110	A nonlocal averaging technique for kinetic parameter estimation from dynamic PET data. , 2011, , .		1
111	New linear transforms for data on a Fourier 2-sphere with application to diffusion MRI. , 2012, , .		1
112	Of the largest eigenvalue for modularity-based partitioning. , 2012, , .		1
113	Parametric distributions for assessing significance in modular partitions of brain networks. , 2013, , .		1
114	A measure of connectivity in the presence of crosstalk. , 2013, , .		1
115	The equivalence of linear spherical deconvolution and model-free linear transform methods for diffusion MRI. , 2013, , .		1
116	rfDemons: Resting fMRI-Based Cortical Surface Registration Using the BrainSync Transform. Lecture Notes in Computer Science, 2018, 11072, 198-205.	1.3	1
117	Low-Rank Modeling of Local Sinogram Neighborhoods with Tomographic Applications. , 2019, , .		1
118	Autoregression and Structured Low-Rank Modeling of Sinograms. , 2020, , .		1
119	Lower white matter volume in betaâ€thalassemia associated with anemia and cognitive performance. American Journal of Hematology, 2020, 95, E144-E146.	4.1	1
120	Regional Susceptibility to Chronic Anemia in WM Microstructure Using Diffusion Tensor Imaging. Blood, 2016, 128, 3640-3640.	1.4	1
121	A Matched Filter Decomposition of fMRI into Resting and Task Components. Lecture Notes in Computer Science, 2019, 11766, 673-681.	1.3	1
122	VARIANCE APPROXIMATION FOR EXPONENTIAL FAMILY PENALIZED MAXIMUM LIKELIHOOD ESTIMATORS: APPLICATION TO KINETIC PARAMETRIC ESTIMATION. , 2007, , .		0
123	Diffusion optical tomography using entropic priors. , 2009, , .		0
124	Structural analysis of the cerebral cortex using blind source separation. , 2011, , .		0
125	Causality in variance in electrophysiological data using the ARCH model. , 2013, , .		0
126	Autoregression and Structured Low-Rank Modeling of Sinogram Neighborhoods. IEEE Transactions on Computational Imaging, 2021, 7, 1-1.	4.4	0

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127	Hemoglobin Level and Platelet Size Predicts Grey and White Matter Volume Loss Measured By Tensor Based Morphology in Sickle Cell Disease. Blood, 2016, 128, 2481-2481.	1.4	0
128	Image reconstruction for PET and SPECT. Imaging in Medical Diagnosis and Therapy, 2017, , 235-257.	0.0	0