Jean-Philippe Thiran

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Multiple sclerosis cortical lesion detection with deep learning at ultraâ€highâ€field MRI. NMR in Biomedicine, 2022, 35, e4730.	1.6	9
2	Insights from the IronTract challenge: Optimal methods for mapping brain pathways from multi-shell diffusion MRI. NeuroImage, 2022, 257, 119327.	2.1	17
3	Resolving bundle-specific intra-axonal T2 values within a voxel using diffusion-relaxation tract-based estimation. NeuroImage, 2021, 227, 117617.	2.1	28
4	MPRAGE to MP2RAGE UNI translation via generative adversarial network improves the automatic tissue and lesion segmentation in multiple sclerosis patients. Computers in Biology and Medicine, 2021, 132, 104297.	3.9	8
5	Bundle-Specific Axon Diameter Index as a New Contrast to Differentiate White Matter Tracts. Frontiers in Neuroscience, 2021, 15, 646034.	1.4	11
6	Fetal Brain Biometric Measurements on 3D Super-Resolution Reconstructed T2-Weighted MRI: An Intra- and Inter-observer Agreement Study. Frontiers in Pediatrics, 2021, 9, 639746.	0.9	13
7	Tractography dissection variability: What happens when 42 groups dissect 14 white matter bundles on the same dataset?. NeuroImage, 2021, 243, 118502.	2.1	94
8	Dataâ€driven myelin water imaging based on T ₁ and T ₂ relaxometry. NMR in Biomedicine, 2021, , e4668.	1.6	0
9	Tractography reproducibility challenge with empirical data (TraCED): The 2017 ISMRM diffusion study group challenge. Journal of Magnetic Resonance Imaging, 2020, 51, 234-249.	1.9	38
10	A comprehensive error rate for multiple testing. Statistical Papers, 2020, 61, 1859-1874.	0.7	1
11	Adaptive phase correction of diffusion-weighted images. NeuroImage, 2020, 206, 116274.	2.1	14
12	Modelâ€based superâ€resolution reconstruction of T ₂ maps. Magnetic Resonance in Medicine, 2020, 83, 906-919.	1.9	11
13	Quantitative brain relaxation atlases for personalized detection and characterization of brain pathology. Magnetic Resonance in Medicine, 2020, 83, 337-351.	1.9	19
14	ActiveAx _{ADD} : Toward nonâ€parametric and orientationally invariant axon diameter distribution mapping using PGSE. Magnetic Resonance in Medicine, 2020, 83, 2322-2330.	1.9	9
15	Multiple sclerosis cortical and WM lesion segmentation at 3T MRI: a deep learning method based on FLAIR and MP2RAGE. NeuroImage: Clinical, 2020, 27, 102335.	1.4	54
16	A new method for accurate in vivo mapping of human brain connections using microstructural and anatomical information. Science Advances, 2020, 6, eaba8245.	4.7	64
17	On the cortical connectivity in the macaque brain: A comparison of diffusion tractography and histological tracing data. NeuroImage, 2020, 221, 117201.	2.1	52
18	Accelerated MP2RAGE imaging using Cartesian phyllotaxis readout and compressed sensing reconstruction. Magnetic Resonance in Medicine, 2020, 84, 1881-1894.	1.9	30

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19	Robust Monte-Carlo Simulations in Diffusion-MRI: Effect of the Substrate Complexity and Parameter Choice on the Reproducibility of Results. Frontiers in Neuroinformatics, 2020, 14, 8.	1.3	26
20	DWI Simulation-Assisted Machine Learning Models for Microstructure Estimation. Mathematics and Visualization, 2020, , 125-134.	0.4	2
21	Automated Detection of Cortical Lesions in Multiple Sclerosis Patients with 7T MRI. Lecture Notes in Computer Science, 2020, , 584-593.	1.0	9
22	T2 Mapping from Super-Resolution-Reconstructed Clinical Fast Spin Echo Magnetic Resonance Acquisitions. Lecture Notes in Computer Science, 2020, , 114-124.	1.0	2
23	A Novel Spatial-Angular Domain Regularisation Approach for Restoration of Diffusion MRI. Mathematics and Visualization, 2019, , 43-53.	0.4	1
24	Comparison of MRI-based automated segmentation methods and functional neurosurgery targeting with direct visualization of the Ventro-intermediate thalamic nucleus at 7T. Scientific Reports, 2019, 9, 1119.	1.6	21
25	Shallow vs Deep Learning Architectures for White Matter Lesion Segmentation in the Early Stages of Multiple Sclerosis. Lecture Notes in Computer Science, 2019, , 142-151.	1.0	13
26	Limits to anatomical accuracy of diffusion tractography using modern approaches. NeuroImage, 2019, 185, 1-11.	2.1	200
27	Towards microstructure fingerprinting: Estimation of tissue properties from a dictionary of Monte Carlo diffusion MRI simulations. NeuroImage, 2019, 184, 964-980.	2.1	38
28	Orientation-Dispersed Apparent Axon Diameter via Multi-Stage Spherical Mean Optimization. Mathematics and Visualization, 2019, , 91-101.	0.4	2
29	Accelerated T ₂ mapping combining parallel MRI and modelâ€based reconstruction: GRAPPATINI. Journal of Magnetic Resonance Imaging, 2018, 48, 359-368.	1.9	71
30	Ultrafast Ultrasound Imaging as an Inverse Problem: Matrix-Free Sparse Image Reconstruction. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 339-355.	1.7	27
31	Transient networks of spatio-temporal connectivity map communication pathways in brain functional systems. NeuroImage, 2017, 155, 490-502.	2.1	65
32	Robust thalamic nuclei segmentation method based on local diffusion magnetic resonance properties. Brain Structure and Function, 2017, 222, 2203-2216.	1.2	58
33	Ax <scp>T</scp> ract: Toward microstructure informed tractography. Human Brain Mapping, 2017, 38, 5485-5500.	1.9	47
34	The challenge of mapping the human connectome based on diffusion tractography. Nature Communications, 2017, 8, 1349.	5.8	956
35	Learning the weight matrix for sparsity averaging in compressive imaging. , 2017, , .		3
36	The Combined Quantification and Interpretation of Multiple Quantitative Magnetic Resonance Imaging Metrics Enlightens Longitudinal Changes Compatible with Brain Repair in Relapsing-Remitting Multiple Sclerosis Patients. Frontiers in Neurology, 2017, 8, 506.	1.1	27

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37	Microstructure Informed Tractography: Pitfalls and Open Challenges. Frontiers in Neuroscience, 2016, 10, 247.	1.4	96
38	Automated detection of white matter and cortical lesions in early stages of multiple sclerosis. Journal of Magnetic Resonance Imaging, 2016, 43, 1445-1454.	1.9	64
39	Sparse regularization methods in ultrafast ultrasound imaging. , 2016, , .		1
40	Morphological component analysis for sparse regularization in plane wave imaging. , 2016, , .		3
41	Brain network characterization of high-risk preterm-born school-age children. NeuroImage: Clinical, 2016, 11, 195-209.	1.4	55
42	A Sparse Reconstruction Framework for Fourier-Based Plane-Wave Imaging. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2016, 63, 2092-2106.	1.7	32
43	Compressed delay-and-sum beamforming for ultrafast ultrasound imaging. , 2016, , .		21
44	Scalable splitting algorithms for big-data interferometric imaging in the SKA era. Monthly Notices of the Royal Astronomical Society, 2016, 462, 4314-4335.	1.6	61
45	Surface-driven registration method for the structure-informed segmentation of diffusion MR images. NeuroImage, 2016, 139, 450-461.	2.1	12
46	Kernel Low-Rank and Sparse Graph for Unsupervised and Semi-Supervised Classification of Hyperspectral Images. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3410-3420.	2.7	64
47	Generative models of the human connectome. NeuroImage, 2016, 124, 1054-1064.	2.1	259
48	A Sparse regularization approach for ultrafast ultrasound imaging. , 2015, , .		9
49	Multicontrast MRI Quantification of Focal Inflammation and Degeneration in Multiple Sclerosis. BioMed Research International, 2015, 2015, 1-9.	0.9	16
50	COMMIT: Convex Optimization Modeling for Microstructure Informed Tractography. IEEE Transactions on Medical Imaging, 2015, 34, 246-257.	5.4	188
51	Improved statistical evaluation of group differences in connectomes by screening–filtering strategy with application to study maturation of brain connections between childhood and adolescence. NeuroImage, 2015, 108, 251-264.	2.1	27
52	Characterizing the connectome in schizophrenia with diffusion spectrum imaging. Human Brain Mapping, 2015, 36, 354-366.	1.9	70
53	An efficient total variation algorithm for super-resolution in fetal brain MRI with adaptive regularization. NeuroImage, 2015, 118, 584-597.	2.1	107
54	Multicontrast <i>connectometry</i> : A new tool to assess cerebellum alterations in early relapsingâ€remitting multiple sclerosis. Human Brain Mapping, 2015, 36, 1609-1619.	1.9	30

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55	Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data. NeuroImage, 2015, 105, 32-44.	2.1	377
56	Structural Brain Connectivity in School-Age Preterm Infants Provides Evidence for Impaired Networks Relevant for Higher Order Cognitive Skills and Social Cognition. Cerebral Cortex, 2015, 25, 2793-2805.	1.6	169
5 7	Quantitative Analysis of Myelin and Axonal Remodeling in the Uninjured Motor Network After Stroke. Brain Connectivity, 2015, 5, 401-412.	0.8	26
58	Spherical Deconvolution of Multichannel Diffusion MRI Data with Non-Gaussian Noise Models and Spatial Regularization. PLoS ONE, 2015, 10, e0138910.	1.1	27
59	Semi-Supervised Segmentation of Ultrasound Images Based on Patch Representation and Continuous Min Cut. PLoS ONE, 2014, 9, e100972.	1.1	32
60	Non-linear low-rank and sparse representation for hyperspectral image analysis. , 2014, , .		4
61	Using Pareto optimality to explore the topology and dynamics of the human connectome. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130530.	1.8	50
62	Sparsity in tensor optimization for optical-interferometric imaging. , 2014, , .		0
63	Global Tractography with Embedded Anatomical Priors for Quantitative Connectivity Analysis. Frontiers in Neurology, 2014, 5, 232.	1.1	34
64	MBIS: Multivariate Bayesian Image Segmentation tool. Computer Methods and Programs in Biomedicine, 2014, 115, 76-94.	2.6	4
65	Advanced MRI unravels the nature of tissue alterations in early multiple sclerosis. Annals of Clinical and Translational Neurology, 2014, 1, 423-432.	1.7	67
66	Resting-brain functional connectivity predicted by analytic measures of network communication. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 833-838.	3.3	530
67	Quantitative Comparison of Reconstruction Methods for Intra-Voxel Fiber Recovery From Diffusion MRI. IEEE Transactions on Medical Imaging, 2014, 33, 384-399.	5.4	145
68	Connectivity and tissue microstructural alterations in right and left temporal lobe epilepsy revealed by diffusion spectrum imaging. NeuroImage: Clinical, 2014, 5, 349-358.	1.4	59
69	Fast Geodesic Active Fields for Image Registration Based on Splitting and Augmented Lagrangian Approaches. IEEE Transactions on Image Processing, 2014, 23, 673-683.	6.0	1
70	Surface Reconstruction From Microscopic Images in Optical Lithography. IEEE Transactions on Image Processing, 2014, 23, 3560-3573.	6.0	8
71	Harmonic Active Contours. IEEE Transactions on Image Processing, 2014, 23, 69-82.	6.0	22
72	Structural connectomics in brain diseases. NeuroImage, 2013, 80, 515-526.	2.1	286

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73	Comparing connectomes across subjects and populations at different scales. Neurolmage, 2013, 80, 416-425.	2.1	65
74	Sparsity Averaging for Compressive Imaging. IEEE Signal Processing Letters, 2013, 20, 591-594.	2.1	60
75	Multi-scale community organization of the human structural connectome and its relationship with resting-state functional connectivity. Network Science, 2013, 1, 353-373.	0.8	104
76	A Connectome-Based Comparison of Diffusion MRI Schemes. PLoS ONE, 2013, 8, e75061.	1.1	21
77	Graph theory reveals dysconnected hubs in 22q11DS and altered nodal efficiency in patients with hallucinations. Frontiers in Human Neuroscience, 2013, 7, 402.	1.0	67
78	Reduced Fronto-Temporal and Limbic Connectivity in the 22q11.2 Deletion Syndrome: Vulnerability Markers for Developing Schizophrenia?. PLoS ONE, 2013, 8, e58429.	1.1	44
79	How to Measure Cortical Folding from MR Images: a Step-by-Step Tutorial to Compute Local Gyrification Index. Journal of Visualized Experiments, 2012, , e3417.	0.2	95
80	Efficient Algorithm for Level Set Method Preserving Distance Function. IEEE Transactions on Image Processing, 2012, 21, 4722-4734.	6.0	70
81	Binary Active Contours using both inside and outside texture descriptors. , 2012, , .		0
82	Multi-pose lipreading and audio-visual speech recognition. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.0	20
83	Structural and Resting State Functional Connectivity of the Subthalamic Nucleus: Identification of Motor STN Parts and the Hyperdirect Pathway. PLoS ONE, 2012, 7, e39061.	1.1	114
84	A new early and automated MRI-based predictor of motor improvement after stroke. Neurology, 2012, 79, 39-46.	1.5	49
85	The Connectome Mapper: An Open-Source Processing Pipeline to Map Connectomes with MRI. PLoS ONE, 2012, 7, e48121.	1.1	248
86	Scale Invariant Feature Transform on the Sphere: Theory and Applications. International Journal of Computer Vision, 2012, 98, 217-241.	10.9	105
87	High b-value diffusion-weighted imaging: A sensitive method to reveal white matter differences in schizophrenia. Psychiatry Research - Neuroimaging, 2012, 201, 144-151.	0.9	21
88	On Dynamic Stream Weighting for Audio-Visual Speech Recognition. IEEE Transactions on Audio Speech and Language Processing, 2012, 20, 1145-1157.	3.8	52
89	Comparison of energy minimization methods for 3-D brain tissue classification. , 2011, , .		1

90 Harmonic active contours for multichannel image segmentation. , 2011, , .

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91	The Connectome Viewer Toolkit: An Open Source Framework to Manage, Analyze, and Visualize Connectomes. Frontiers in Neuroinformatics, 2011, 5, 3.	1.3	95
92	Active deformation fields: Dense deformation field estimation for atlas-based segmentation using the active contour framework. Medical Image Analysis, 2011, 15, 787-800.	7.0	25
93	Geodesic Active Fields—A Geometric Framework for Image Registration. IEEE Transactions on Image Processing, 2011, 20, 1300-1312.	6.0	28
94	Regional cortical volumes and congenital heart disease: a MRI study in 22q11.2 deletion syndrome. Journal of Neurodevelopmental Disorders, 2010, 2, 224-234.	1.5	27
95	Influence of the implanted pulse generator as reference electrode in finite element model of monopolar deep brain stimulation. Journal of Neuroscience Methods, 2010, 186, 90-96.	1.3	23
96	MR connectomics: Principles and challenges. Journal of Neuroscience Methods, 2010, 194, 34-45.	1.3	251
97	Information theoretic combination of pattern classifiers. Pattern Recognition, 2010, 43, 3412-3421.	5.1	33
98	Basic Concepts of Multimodal Analysis. , 2010, , 145-152.		1
99	Geodesic Active Fieldsâ \in "A Geometric Framework for Image Registration. , 2010, , .		1
100	Modality Integration Methods. , 2010, , 171-184.		0
101	Classification of tensors and fiber tracts using Mercer-kernels encoding soft probabilistic spatial and diffusion information. , 2009, , .		2
102	Segmentation of Head and Neck Lymph Node Regions for Radiotherapy Planning Using Active Contour-Based Atlas Registration. IEEE Journal on Selected Topics in Signal Processing, 2009, 3, 135-147.	7.3	49
103	Cooperative Object Segmentation and Behavior Inference inÂlmage Sequences. International Journal of Computer Vision, 2009, 84, 146-162.	10.9	7
104	Congenital heart disease affects local gyrification in 22q11.2 deletion syndrome. Developmental Medicine and Child Neurology, 2009, 51, 746-753.	1.1	58
105	Deviant trajectories of cortical maturation in 22q11.2 deletion syndrome (22q11DS): A cross-sectional and longitudinal study. Schizophrenia Research, 2009, 115, 182-190.	1.1	112
106	Information Theoretic Feature Extraction for Audio-Visual Speech Recognition. IEEE Transactions on Signal Processing, 2009, 57, 4765-4776.	3.2	51
107	A Scale-Space of Cortical Feature Maps. IEEE Signal Processing Letters, 2009, 16, 873-876.	2.1	4
108	Local landmark-based registration for fMRI group studies of nonprimary auditory cortex. NeuroImage, 2009, 44, 145-153.	2.1	14

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109	Classification of tensors and fiber tracts using Mercer-kernels encoding soft probabilistic spatial and diffusion information. , 2009, , .		0
110	Active Contour-Based Segmentation of Head and Neck with Adaptive Atlas Selection. , 2009, , .		1
111	A Surface-Based Approach to Quantify Local Cortical Gyrification. IEEE Transactions on Medical Imaging, 2008, 27, 161-170.	5.4	470
112	Extraction of Audio Features Specific to Speech Production for Multimodal Speaker Detection. IEEE Transactions on Multimedia, 2008, 10, 63-73.	5.2	27
113	Shape prior based on statistical map for active contour segmentation. , 2008, , .		8
114	Fast texture segmentation model based on the shape operator and active contour. , 2008, , .		51
115	Estimating the Confidence Level of White Matter Connections Obtained with MRI Tractography. PLoS ONE, 2008, 3, e4006.	1.1	25
116	An Active Contour-Based Atlas Registration Model Applied to Automatic Subthalamic Nucleus Targeting on MRI: Method and Validation. Lecture Notes in Computer Science, 2008, 11, 980-988.	1.0	7
117	Localization of electrodes in the subthalamic nucleus on magnetic resonance imaging. Journal of Neurosurgery, 2007, 106, 36-44.	0.9	116
118	Representing Diffusion MRI in 5-D Simplifies Regularization and Segmentation of White Matter Tracts. IEEE Transactions on Medical Imaging, 2007, 26, 1547-1554.	5.4	19
119	Scale Space Analysis and Active Contours for Omnidirectional Images. IEEE Transactions on Image Processing, 2007, 16, 1888-1901.	6.0	57
120	Variational Segmentation using Fuzzy Region Competition and Local Non-Parametric Probability Density Functions. , 2007, , .		25
121	Face detection with boosted Gaussian features. Pattern Recognition, 2007, 40, 2283-2291.	5.1	42
122	A level set method for segmentation of the thalamus and its nuclei in DT-MRI. Signal Processing, 2007, 87, 309-321.	2.1	62
123	Mapping Human Whole-Brain Structural Networks with Diffusion MRI. PLoS ONE, 2007, 2, e597.	1.1	707
124	Fast Global Minimization of the Active Contour/Snake Model. Journal of Mathematical Imaging and Vision, 2007, 28, 151-167.	0.8	763
125	Information Theoretic Combination of Classifiers with Application to AdaBoost. , 2007, , 171-179.		6
126	A Variational Framework for the Simultaneous Segmentation and Object Behavior Classification of		3

Image Sequences. , 2007, , 652-664.

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127	Analysis of Head-Mounted Wireless Camera Videos for Early Diagnosis of Autism. Advances in Intelligent and Soft Computing, 2007, , 663-670.	0.2	15
128	A Cross Validation Study of Deep Brain Stimulation Targeting: From Experts to Atlas-Based, Segmentation-Based and Automatic Registration Algorithms. IEEE Transactions on Medical Imaging, 2006, 25, 1440-1450.	5.4	44
129	Fibertract segmentation in position orientation space from high angular resolution diffusion MRI. NeuroImage, 2006, 32, 665-675.	2.1	41
130	Human auditory belt areas specialized in sound recognition: a functional magnetic resonance imaging study. NeuroReport, 2006, 17, 1659-1662.	0.6	34
131	Understanding Diffusion MR Imaging Techniques: From Scalar Diffusion-weighted Imaging to Diffusion Tensor Imaging and Beyond. Radiographics, 2006, 26, S205-S223.	1.4	618
132	A Variational Model for Object Segmentation Using Boundary Information and Shape Prior Driven by the Mumford-Shah Functional. International Journal of Computer Vision, 2006, 68, 145-162.	10.9	118
133	Multiscale Active Contours. International Journal of Computer Vision, 2006, 70, 197-211.	10.9	33
134	Hand preference and sex shape the architecture of language networks. Human Brain Mapping, 2006, 27, 828-835.	1.9	86
135	From error probability to information theoretic (multi-modal) signal processing. Signal Processing, 2005, 85, 875-902.	2.1	27
136	White matter fiber tract segmentation in DT-MRI using geometric flows. Medical Image Analysis, 2005, 9, 223-236.	7.0	71
137	Representing Diffusion MRI in 5D for Segmentation of White Matter Tracts with a Level Set Method. Lecture Notes in Computer Science, 2005, 19, 311-320.	1.0	9
138	Comparison and validation of tissue modelization and statistical classification methods in T1-weighted MR brain images. IEEE Transactions on Medical Imaging, 2005, 24, 1548-1565.	5.4	335
139	Atlas-Based Segmentation of Pathological MR Brain Images Using a Model of Lesion Growth. IEEE Transactions on Medical Imaging, 2004, 23, 1301-1314.	5.4	172
140	Sound recognition and localization in man: specialized cortical networks and effects of acute circumscribed lesions. Experimental Brain Research, 2003, 153, 591-604.	0.7	56
141	Unilateral hemispheric lesions disrupt parallel processing within the contralateral intact hemisphere: an auditory fMRI study. NeuroImage, 2003, 20, S66-S74.	2.1	20
142	A New Brain Segmentation Framework. Lecture Notes in Computer Science, 2003, , 586-593.	1.0	2
143	Lossy to lossless object-based coding of 3-D MRI data. IEEE Transactions on Image Processing, 2002, 11, 1053-1061.	6.0	31
144	What and Where in human audition: selective deficits following focal hemispheric lesions. Experimental Brain Research, 2002, 147, 8-15.	0.7	195

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145	Distinct Pathways Involved in Sound Recognition and Localization: A Human fMRI Study. NeuroImage, 2001, 14, 802-816.	2.1	367
146	A queue-based region growing algorithm for accurate segmentation of multi-dimensional digital images. Signal Processing, 1997, 60, 1-10.	2.1	30
147	<title>Automatic registration of 3D MR images with a computerized brain atlas</title> . , 1996, 2710, 438.		13