Jean-Philippe Thiran

List of Publications by Year in Descending Order

145 papers	8,698 citations	44 h-index	91 g-index
155 ext. papers	10,480 ext. citations	5.6 avg, IF	5.85 L-index

#	Paper	IF	Citations
145	Multiple sclerosis cortical lesion detection with deep learning at ultra-high-field MRI.. *NMR in Biomedicine*, **2022**, e4730	4.4	1
144	Insights from the IronTract challenge: Optimal methods for mapping brain pathways from multi-shell diffusion MRI. *NeuroImage*, **2022**, 257, 119327	7.9	1
143	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	7	2
142	Bundle-Specific Axon Diameter Index as a New Contrast to Differentiate White Matter Tracts. *Frontiers in Neuroscience*, **2021**, 15, 646034	5.1	3
141	Resolving bundle-specific intra-axonal T values within a voxel using diffusion-relaxation tract-based estimation. *NeuroImage*, **2021**, 227, 117617	7.9	11
140	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	3.4	2
139	Tractography dissection variability: What happens when 42 groups dissect 14 white matter bundles on the same dataset?. *NeuroImage*, **2021**, 243, 118502	7.9	18
138	Data-driven myelin water imaging based on T and T relaxometry.. *NMR in Biomedicine*, **2021**, e4668	4.4	
137	Accelerated MP2RAGE imaging using Cartesian phyllotaxis readout and compressed sensing reconstruction. *Magnetic Resonance in Medicine*, **2020**, 84, 1881-1894	4.4	12
136	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	3.9	15
135	Automated Detection of Cortical Lesions in Multiple Sclerosis Patients with 7T MRI. *Lecture Notes in Computer Science*, **2020**, 584-593	0.9	4
134	T2 Mapping from Super-Resolution-Reconstructed Clinical Fast Spin Echo Magnetic Resonance Acquisitions. *Lecture Notes in Computer Science*, **2020**, 114-124	0.9	
133	DWI Simulation-Assisted Machine Learning Models for Microstructure Estimation. *Mathematics and Visualization*, **2020**, 125-134	0.6	1
132	ActiveAx : Toward non-parametric and orientationally invariant axon diameter distribution mapping using PGSE. *Magnetic Resonance in Medicine*, **2020**, 83, 2322-2330	4.4	5
131	Multiple sclerosis cortical and WM lesion segmentation at 3T MRI: a deep learning method based on FLAIR and MP2RAGE. *NeuroImage: Clinical*, **2020**, 27, 102335	5.3	31
130	A new method for accurate in vivo mapping of human brain connections using microstructural and anatomical information. *Science Advances*, **2020**, 6, eaba8245	14.3	30
129	On the cortical connectivity in the macaque brain: A comparison of diffusion tractography and histological tracing data. *NeuroImage*, **2020**, 221, 117201	7.9	22

128	Tractography reproducibility challenge with empirical data (TraCED): The 2017 ISMRM diffusion study group challenge. *Journal of Magnetic Resonance Imaging*, **2020**, 51, 234-249	5.6	21
127	A comprehensive error rate for multiple testing. *Statistical Papers*, **2020**, 61, 1859-1874	1	
126	Adaptive phase correction of diffusion-weighted images. *NeuroImage*, **2020**, 206, 116274	7.9	7
125	Model-based super-resolution reconstruction of T maps. *Magnetic Resonance in Medicine*, **2020**, 83, 906-919	4.4	5
124	Quantitative brain relaxation atlases for personalized detection and characterization of brain pathology. *Magnetic Resonance in Medicine*, **2020**, 83, 337-351	4.4	9
123	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	4.9	15
122	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	0.9	4
121	A Novel Spatial-Angular Domain Regularisation Approach for Restoration of Diffusion MRI. *Mathematics and Visualization*, **2019**, 43-53	0.6	1
120	Orientation-Dispersed Apparent Axon Diameter via Multi-Stage Spherical Mean Optimization. *Mathematics and Visualization*, **2019**, 91-101	0.6	1
119	Limits to anatomical accuracy of diffusion tractography using modern approaches. *NeuroImage*, **2019**, 185, 1-11	7.9	110
118	Towards microstructure fingerprinting: Estimation of tissue properties from a dictionary of Monte Carlo diffusion MRI simulations. *NeuroImage*, **2019**, 184, 964-980	7.9	22
117	Accelerated T mapping combining parallel MRI and model-based reconstruction: GRAPPATINI. *Journal of Magnetic Resonance Imaging*, **2018**, 48, 359-368	5.6	45
116	Ultrafast Ultrasound Imaging as an Inverse Problem: Matrix-Free Sparse Image Reconstruction. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2018**, 65, 339-355	3.2	18
115	Transient networks of spatio-temporal connectivity map communication pathways in brain functional systems. *NeuroImage*, **2017**, 155, 490-502	7.9	37
114	Robust thalamic nuclei segmentation method based on local diffusion magnetic resonance properties. *Brain Structure and Function*, **2017**, 222, 2203-2216	4	35
113	AxTract: Toward microstructure informed tractography. *Human Brain Mapping*, **2017**, 38, 5485-5500	5.9	39
112	The challenge of mapping the human connectome based on diffusion tractography. *Nature Communications*, **2017**, 8, 1349	17.4	609
111	Learning the weight matrix for sparsity averaging in compressive imaging **2017**,		1

110	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	4.1	14
109	Generative models of the human connectome. *NeuroImage*, **2016**, 124, 1054-1064	7.9	180
108	Compressed delay-and-sum beamforming for ultrafast ultrasound imaging **2016**,		13
107	Scalable splitting algorithms for big-data interferometric imaging in the SKA era. *Monthly Notices of the Royal Astronomical Society*, **2016**, 462, 4314-4335	4.3	37
106	Surface-driven registration method for the structure-informed segmentation of diffusion MR images. *NeuroImage*, **2016**, 139, 450-461	7.9	7
105	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	8.1	53
104	Microstructure Informed Tractography: Pitfalls and Open Challenges. *Frontiers in Neuroscience*, **2016**, 10, 247	5.1	80
103	Automated detection of white matter and cortical lesions in early stages of multiple sclerosis. *Journal of Magnetic Resonance Imaging*, **2016**, 43, 1445-54	5.6	48
102	Morphological component analysis for sparse regularization in plane wave imaging **2016**,		2
101	Brain network characterization of high-risk preterm-born school-age children. *NeuroImage: Clinical*, **2016**, 11, 195-209	5.3	37
100	A Sparse Reconstruction Framework for Fourier-Based Plane-Wave Imaging. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2016**, 63, 2092-2106	3.2	26
99	An efficient total variation algorithm for super-resolution in fetal brain MRI with adaptive regularization. *NeuroImage*, **2015**, 118, 584-97	7.9	67
98	Multicontrast connectometry: a new tool to assess cerebellum alterations in early relapsing-remitting multiple sclerosis. *Human Brain Mapping*, **2015**, 36, 1609-19	5.9	22
97	Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data. *NeuroImage*, **2015**, 105, 32-44	7.9	225
96	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, 2793-805	5.1	128
95	Quantitative Analysis of Myelin and Axonal Remodeling in the Uninjured Motor Network After Stroke. *Brain Connectivity*, **2015**, 5, 401-12	2.7	22
94	A Sparse regularization approach for ultrafast ultrasound imaging **2015**,		5
93	Multicontrast MRI Quantification of Focal Inflammation and Degeneration in Multiple Sclerosis. *BioMed Research International*, **2015**, 2015, 569123	3	15

92	COMMIT: Convex optimization modeling for microstructure informed tractography. *IEEE Transactions on Medical Imaging*, **2015**, 34, 246-57	11.7	138
91	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, 251-64	7.9	18
90	Characterizing the connectome in schizophrenia with diffusion spectrum imaging. *Human Brain Mapping*, **2015**, 36, 354-66	5.9	55
89	Spherical Deconvolution of Multichannel Diffusion MRI Data with Non-Gaussian Noise Models and Spatial Regularization. *PLoS ONE*, **2015**, 10, e0138910	3.7	21
88	Advanced MRI unravels the nature of tissue alterations in early multiple sclerosis. *Annals of Clinical and Translational Neurology*, **2014**, 1, 423-32	5.3	53
87	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, 833-8	11.5	371
86	Quantitative comparison of reconstruction methods for intra-voxel fiber recovery from diffusion MRI. *IEEE Transactions on Medical Imaging*, **2014**, 33, 384-99	11.7	119
85	Connectivity and tissue microstructural alterations in right and left temporal lobe epilepsy revealed by diffusion spectrum imaging. *NeuroImage: Clinical*, **2014**, 5, 349-58	5.3	44
84	Fast Geodesic Active Fields for Image Registration Based on Splitting and Augmented Lagrangian Approaches. *IEEE Transactions on Image Processing*, **2014**, 23, 673-83	8.7	
83	Surface reconstruction from microscopic images in optical lithography. *IEEE Transactions on Image Processing*, **2014**, 23, 3560-73	8.7	7
82	Harmonic active contours. *IEEE Transactions on Image Processing*, **2014**, 23, 69-82	8.7	19
81	Semi-supervised segmentation of ultrasound images based on patch representation and continuous min cut. *PLoS ONE*, **2014**, 9, e100972	3.7	22
80	Non-linear low-rank and sparse representation for hyperspectral image analysis **2014**,		2
79	Using Pareto optimality to explore the topology and dynamics of the human connectome. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2014**, 369,	5.8	34
78	Global tractography with embedded anatomical priors for quantitative connectivity analysis. *Frontiers in Neurology*, **2014**, 5, 232	4.1	26
77	MBIS: multivariate Bayesian image segmentation tool. *Computer Methods and Programs in Biomedicine*, **2014**, 115, 76-94	6.9	3
76	Structural connectomics in brain diseases. *NeuroImage*, **2013**, 80, 515-26	7.9	218
75	Comparing connectomes across subjects and populations at different scales. *NeuroImage*, **2013**, 80, 416-25	7.9	55

74	Sparsity Averaging for Compressive Imaging. *IEEE Signal Processing Letters*, **2013**, 20, 591-594	3.2	46
73	Multi-scale community organization of the human structural connectome and its relationship with resting-state functional connectivity. *Network Science*, **2013**, 1, 353-373	2.9	77
72	A connectome-based comparison of diffusion MRI schemes. *PLoS ONE*, **2013**, 8, e75061	3.7	16
71	Graph theory reveals dysconnected hubs in 22q11DS and altered nodal efficiency in patients with hallucinations. *Frontiers in Human Neuroscience*, **2013**, 7, 402	3.3	52
70	Reduced fronto-temporal and limbic connectivity in the 22q11.2 deletion syndrome: vulnerability markers for developing schizophrenia?. *PLoS ONE*, **2013**, 8, e58429	3.7	37
69	High b-value diffusion-weighted imaging: a sensitive method to reveal white matter differences in schizophrenia. *Psychiatry Research - Neuroimaging*, **2012**, 201, 144-51	2.9	18
68	On Dynamic Stream Weighting for Audio-Visual Speech Recognition. *IEEE Transactions on Audio Speech and Language Processing*, **2012**, 20, 1145-1157		35
67	Efficient algorithm for level set method preserving distance function. *IEEE Transactions on Image Processing*, **2012**, 21, 4722-34	8.7	54
66	Multi-pose lipreading and audio-visual speech recognition. *Eurasip Journal on Advances in Signal Processing*, **2012**, 2012,	1.9	11
65	Structural and resting state functional connectivity of the subthalamic nucleus: identification of motor STN parts and the hyperdirect pathway. *PLoS ONE*, **2012**, 7, e39061	3.7	86
64	A new early and automated MRI-based predictor of motor improvement after stroke. *Neurology*, **2012**, 79, 39-46	6.5	37
63	The connectome mapper: an open-source processing pipeline to map connectomes with MRI. *PLoS ONE*, **2012**, 7, e48121	3.7	180
62	Scale Invariant Feature Transform on the Sphere: Theory and Applications. *International Journal of Computer Vision*, **2012**, 98, 217-241	10.6	74
61	How to measure cortical folding from MR images: a step-by-step tutorial to compute local gyrification index. *Journal of Visualized Experiments*, **2012**, e3417	1.6	73
60	The connectome viewer toolkit: an open source framework to manage, analyze, and visualize connectomes. *Frontiers in Neuroinformatics*, **2011**, 5, 3	3.9	71
59	Active deformation fields: dense deformation field estimation for atlas-based segmentation using the active contour framework. *Medical Image Analysis*, **2011**, 15, 787-800	15.4	24
58	Geodesic active fields--a geometric framework for image registration. *IEEE Transactions on Image Processing*, **2011**, 20, 1300-12	8.7	22
57	Comparison of energy minimization methods for 3-D brain tissue classification **2011**,		1

56	Basic Concepts of Multimodal Analysis **2010**, 145-152		
55	Geodesic Active FieldsA Geometric Framework for Image Registration **2010**,		1
54	Regional cortical volumes and congenital heart disease: a MRI study in 22q11.2 deletion syndrome. *Journal of Neurodevelopmental Disorders*, **2010**, 2, 224-234	4.6	23
53	Influence of the implanted pulse generator as reference electrode in finite element model of monopolar deep brain stimulation. *Journal of Neuroscience Methods*, **2010**, 186, 90-6	3	22
52	MR connectomics: Principles and challenges. *Journal of Neuroscience Methods*, **2010**, 194, 34-45	3	218
51	Information theoretic combination of pattern classifiers. *Pattern Recognition*, **2010**, 43, 3412-3421	7.7	28
50	Modality Integration Methods **2010**, 171-184		
49	Classification of tensors and fiber tracts using Mercer-kernels encoding soft probabilistic spatial and diffusion information **2009**,		2
48	. *IEEE Journal on Selected Topics in Signal Processing*, **2009**, 3, 135-147	7.5	37
47	Cooperative Object Segmentation and Behavior Inference in Image Sequences. *International Journal of Computer Vision*, **2009**, 84, 146-162	10.6	6
46	Congenital heart disease affects local gyrification in 22q11.2 deletion syndrome. *Developmental Medicine and Child Neurology*, **2009**, 51, 746-53	3.3	54
45	Deviant trajectories of cortical maturation in 22q11.2 deletion syndrome (22q11DS): a cross-sectional and longitudinal study. *Schizophrenia Research*, **2009**, 115, 182-90	3.6	92
44	Information Theoretic Feature Extraction for Audio-Visual Speech Recognition. *IEEE Transactions on Signal Processing*, **2009**, 57, 4765-4776	4.8	42
43	A Scale-Space of Cortical Feature Maps. *IEEE Signal Processing Letters*, **2009**, 16, 873-876	3.2	4
42	Local landmark-based registration for fMRI group studies of nonprimary auditory cortex. *NeuroImage*, **2009**, 44, 145-53	7.9	13
41	Active Contour-Based Segmentation of Head and Neck with Adaptive Atlas Selection **2009**,		1
40	A surface-based approach to quantify local cortical gyrification. *IEEE Transactions on Medical Imaging*, **2008**, 27, 161-70	11.7	373
39	. *IEEE Transactions on Multimedia*, **2008**, 10, 63-73	6.6	21

38	Shape prior based on statistical map for active contour segmentation **2008**,		5
37	Fast texture segmentation model based on the shape operator and active contour **2008**,		38
36	Estimating the confidence level of white matter connections obtained with MRI tractography. *PLoS ONE*, **2008**, 3, e4006	3.7	25
35	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, 980-8	0.9	6
34	Face detection with boosted Gaussian features. *Pattern Recognition*, **2007**, 40, 2283-2291	7.7	27
33	A level set method for segmentation of the thalamus and its nuclei in DT-MRI. *Signal Processing*, **2007**, 87, 309-321	4.4	51
32	Mapping human whole-brain structural networks with diffusion MRI. *PLoS ONE*, **2007**, 2, e597	3.7	590
31	Fast Global Minimization of the Active Contour/Snake Model. *Journal of Mathematical Imaging and Vision*, **2007**, 28, 151-167	1.6	613
30	Localization of electrodes in the subthalamic nucleus on magnetic resonance imaging. *Journal of Neurosurgery*, **2007**, 106, 36-44	3.2	102
29	Representing diffusion MRI in 5-D simplifies regularization and segmentation of white matter tracts. *IEEE Transactions on Medical Imaging*, **2007**, 26, 1547-54	11.7	17
28	Scale space analysis and active contours for omnidirectional images. *IEEE Transactions on Image Processing*, **2007**, 16, 1888-901	8.7	45
27	Variational Segmentation using Fuzzy Region Competition and Local Non-Parametric Probability Density Functions **2007**,		20
26	Information Theoretic Combination of Classifiers with Application to AdaBoost **2007**, 171-179		6
25	A Variational Framework for the Simultaneous Segmentation and Object Behavior Classification of Image Sequences **2007**, 652-664		2
24	Analysis of Head-Mounted Wireless Camera Videos for Early Diagnosis of Autism. *Advances in Intelligent and Soft Computing*, **2007**, 663-670		13
23	Hand preference and sex shape the architecture of language networks. *Human Brain Mapping*, **2006** , 27, 828-35	5.9	81
22	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, 1440-50	11.7	37
21	Fibertract segmentation in position orientation space from high angular resolution diffusion MRI. *NeuroImage*, **2006**, 32, 665-75	7.9	35

20	Human auditory belt areas specialized in sound recognition: a functional magnetic resonance imaging study. *NeuroReport*, **2006**, 17, 1659-62	1.7	26
19	Understanding diffusion MR imaging techniques: from scalar diffusion-weighted imaging to diffusion tensor imaging and beyond. *Radiographics*, **2006**, 26 Suppl 1, S205-23	5.4	506
18	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	10.6	102
17	Multiscale Active Contours. *International Journal of Computer Vision*, **2006**, 70, 197-211	10.6	25
16	Comparison and validation of tissue modelization and statistical classification methods in T1-weighted MR brain images. *IEEE Transactions on Medical Imaging*, **2005**, 24, 1548-65	11.7	302
15	From error probability to information theoretic (multi-modal) signal processing. *Signal Processing*, **2005**, 85, 875-902	4.4	25
14	White matter fiber tract segmentation in DT-MRI using geometric flows. *Medical Image Analysis*, **2005**, 9, 223-36	15.4	58
13	Representing diffusion MRI in 5D for segmentation of white matter tracts with a level set method. *Lecture Notes in Computer Science*, **2005**, 19, 311-20	0.9	7
12	Multiscale Active Contours. *Lecture Notes in Computer Science*, **2005**, 167-178	0.9	5
11	Atlas-based segmentation of pathological MR brain images using a model of lesion growth. *IEEE Transactions on Medical Imaging*, **2004**, 23, 1301-14	11.7	135
10	A New Brain Segmentation Framework. *Lecture Notes in Computer Science*, **2003**, 586-593	0.9	2
9	Sound recognition and localization in man: specialized cortical networks and effects of acute circumscribed lesions. *Experimental Brain Research*, **2003**, 153, 591-604	2.3	53
8	Unilateral hemispheric lesions disrupt parallel processing within the contralateral intact hemisphere: an auditory fMRI study. *NeuroImage*, **2003**, 20 Suppl 1, S66-74	7.9	19
7	What and where in human audition: selective deficits following focal hemispheric lesions. *Experimental Brain Research*, **2002**, 147, 8-15	2.3	150
6	Lossy to lossless object-based coding of 3-D MRI data. *IEEE Transactions on Image Processing*, **2002**, 11, 1053-61	8.7	23
5	Distinct pathways involved in sound recognition and localization: a human fMRI study. *NeuroImage*, **2001**, 14, 802-16	7.9	331
4	A queue-based region growing algorithm for accurate segmentation of multi-dimensional digital images. *Signal Processing*, **1997**, 60, 1-10	4.4	22
3	Automatic registration of 3D MR images with a computerized brain atlas **1996**, 2710, 438		5

2	Tractography dissection variability: what happens when 42 groups dissect 14 white matter bundles on the same dataset?	5
1	Reducing false positives in tractography with microstructural and anatomical priors	5