Philippe Ciuciu

List of Publications by Year
in descending order

117 papers	2,879 citations	218677 26 h-index	197818 49 g-index
121 all docs	121 docs citations	121 times ranked	2455 citing authors

#	Article	IF	Citations
1	Letter Binding and Invariant Recognition of Masked Words. Behavioral and Neuroimaging Evidence. Psychological Science, 2004, 15, 307-313.	3.3	336
2	Dealing with the shortcomings of spatial normalization: Multi-subject parcellation of fMRI datasets. Human Brain Mapping, 2006, 27, 678-693.	3.6	166
3	Scale-free and multifractal time dynamics of fMRI signals during rest and task. Frontiers in Physiology, 2012, 3, 186.	2.8	157
4	Functional segregation of cortical language areas by sentence repetition. Human Brain Mapping, 2006, 27, 360-371.	3.6	132
5	Robust Bayesian estimation of the hemodynamic response function in event-related BOLD fMRI using basic physiological information. Human Brain Mapping, 2003, 19, 1-17.	3.6	119
6	Unsupervised robust nonparametric estimation of the hemodynamic response function for any fmri experiment. IEEE Transactions on Medical Imaging, 2003, 22, 1235-1251.	8.9	114
7	Results of the 2020 fastMRI Challenge for Machine Learning MR Image Reconstruction. IEEE Transactions on Medical Imaging, 2021, 40, 2306-2317.	8.9	114
8	Interplay between functional connectivity and scale-free dynamics in intrinsic fMRI networks. NeuroImage, 2014, 95, 248-263.	4.2	107
9	Variable Density Sampling with Continuous Trajectories. SIAM Journal on Imaging Sciences, 2014, 7, 1962-1992.	2.2	88
10	Spatially Adaptive Mixture Modeling for Analysis of fMRI Time Series. IEEE Transactions on Medical Imaging, 2010, 29, 1059-1074.	8.9	82
11	A fully Bayesian approach to the parcel-based detection-estimation of brain activity in fMRI. NeuroImage, 2008, 41, 941-969.	4.2	76
12	On the Generation of Sampling Schemes for Magnetic Resonance Imaging. SIAM Journal on Imaging Sciences, 2016, 9, 2039-2072.	2.2	74
13	A wavelet-based regularized reconstruction algorithm for SENSE parallel MRI with applications to neuroimagingâ˜†. Medical Image Analysis, 2011, 15, 185-201.	11.6	72
14	Fast Joint Detection-Estimation of Evoked Brain Activity in Event-Related fMRI Using a Variational Approach. IEEE Transactions on Medical Imaging, 2013, 32, 821-837.	8.9	63
15	Joint detection-estimation of brain activity in functional MRI: a Multichannel Deconvolution solution. IEEE Transactions on Signal Processing, 2005, 53, 3488-3502.	5.3	60
16	Data-driven HRF estimation for encoding and decoding models. NeuroImage, 2015, 104, 209-220.	4.2	55
17	The neural bases of the constructive nature of autobiographical memories studied with a self-paced fMRI design. Memory, 2008, 16, 351-363.	1.7	51
18	SPARKLING: variableâ€density kâ€space filling curves for accelerated T₂[*]â€weighted MRI. Magnetic Resonance in Medicine, 2019, 81, 3643-3661.	3.0	49

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19	Log Wavelet Leaders Cumulant Based Multifractal Analysis of EVI fMRI Time Series: Evidence of Scaling in Ongoing and Evoked Brain Activity. IEEE Journal on Selected Topics in Signal Processing, 2008, 2, 929-943.	10.8	47
20	Structural Analysis of fMRI Data Revisited: Improving the Sensitivity and Reliability of fMRI Group Studies. IEEE Transactions on Medical Imaging, 2007, 26, 1256-1269.	8.9	46
21	Anatomically informed interpolation of fMRI data on the cortical surface. NeuroImage, 2006, 31, 1475-1486.	4.2	42
22	High temporal resolution functional MRI using parallel echo volumar imaging. Journal of Magnetic Resonance Imaging, 2008, 27, 744-753.	3.4	40
23	Group-level impacts of within- and between-subject hemodynamic variability in fMRI. NeuroImage, 2013, 82, 433-448.	4.2	40
24	Self-similarity and multifractality in human brain activity: A wavelet-based analysis of scale-free brain dynamics. Journal of Neuroscience Methods, 2018, 309, 175-187.	2.5	33
25	Supramodal processing optimizes visual perceptual learning and plasticity. NeuroImage, 2014, 93, 32-46.	4.2	32
26	A Majorize-Minimize Memory Gradient method for complex-valued inverse problems. Signal Processing, 2014, 103, 285-295.	3.7	32
27	Estimation of the Hemodynamic Response in Event-Related Functional MRI: Bayesian Networks as a Framework for Efficient Bayesian Modeling and Inference. IEEE Transactions on Medical Imaging, 2004, 23, 959-967.	8.9	30
28	Benchmarking MRI Reconstruction Neural Networks on Large Public Datasets. Applied Sciences (Switzerland), 2020, 10, 1816.	2.5	29
29	A Hierarchical Bayesian Model for Frame Representation. IEEE Transactions on Signal Processing, 2010, 58, 5560-5571.	5.3	27
30	Spatio-temporal wavelet regularization for parallel MRI reconstruction: application to functional MRI. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2014, 27, 509-529.	2.0	25
31	Regularized estimation of mixed spectra using a circular Gibbs-Markov model. IEEE Transactions on Signal Processing, 2001, 49, 2202-2213.	5.3	24
32	NC-PDNet: A Density-Compensated Unrolled Network for 2D and 3D Non-Cartesian MRI Reconstruction. IEEE Transactions on Medical Imaging, 2022, 41, 1625-1638.	8.9	24
33	Modulation of scale-free properties of brain activity in MEG. , 2012, , .		23
34	Variable density compressed sensing in MRI. Theoretical vs heuristic sampling strategies. , 2013, , .		22
35	Identifying a neuroanatomical signature of schizophrenia, reproducible across sites and stages, using machine learning with structured sparsity. Acta Psychiatrica Scandinavica, 2018, 138, 571-580.	4.5	20
36	Prediction of activation patterns preceding hallucinations in patients with schizophrenia using machine learning with structured sparsity. Human Brain Mapping, 2018, 39, 1777-1788.	3.6	19

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37	PySAP: Python Sparse Data Analysis Package for multidisciplinary image processing. Astronomy and Computing, 2020, 32, 100402.	1.7	19
38	A Projection Algorithm for Gradient Waveforms Design in Magnetic Resonance Imaging. IEEE Transactions on Medical Imaging, 2016, 35, 2026-2039.	8.9	18
39	Structured Sparse Principal Components Analysis With the TV-Elastic Net Penalty. IEEE Transactions on Medical Imaging, 2018, 37, 396-407.	8.9	16
40	3D variableâ€density SPARKLING trajectories for highâ€resolution T2*â€weighted magnetic resonance imaging. NMR in Biomedicine, 2020, 33, e4349.	2.8	15
41	A half-quadratic block-coordinate descent method for spectral estimation. Signal Processing, 2002, 82, 941-959.	3.7	14
42	A Projection Method on Measures Sets. Constructive Approximation, 2017, 45, 83-111.	3.0	14
43	Spatial Mixture Modelling for the Joint Detection-Estimation of Brain Activity in fMRI. , 2007, , .		12
44	Min-max Extrapolation Scheme for Fast Estimation of 3D Potts Field Partition Functions. Application to the Joint Detection-Estimation of Brain Activity in fMRI. Journal of Signal Processing Systems, 2011, 65, 325-338.	2.1	12
45	Multivariate semi-blind deconvolution of fMRI time series. NeuroImage, 2021, 241, 118418.	4.2	12
46	Estimation of the Hemodynamic Response Function in Event-Related Functional MRI: Directed Acyclic Graphs for a General Bayesian Inference Framework. Lecture Notes in Computer Science, 2003, 18, 635-646.	1.3	11
47	A Bayesian non-parametric hidden Markov random model for hemodynamic brain parcellation. Signal Processing, 2017, 135, 132-146.	3.7	11
48	Sparsity-based Blind Deconvolution of Neural Activation Signal in FMRI. , 2019, , .		11
49	Flexible multivariate hemodynamics fMRI data analyses and simulations with PyHRF. Frontiers in Neuroscience, 2014, 8, 67.	2.8	10
50	Revisiting Functional Connectivity for Infraslow Scale-Free Brain Dynamics Using Complex Wavelets. Frontiers in Physiology, 2020, 11, 578537.	2.8	9
51	Robust Extrapolation Scheme for Fast Estimation of 3D Ising Field Partition Functions: Application to Within-Subject fMRI Data Analysis. Lecture Notes in Computer Science, 2009, 12, 975-983.	1.3	9
52	Learning-induced modulation of scale-free properties of brain activity measured with MEG. , 2013, , .		8
53	Hemodynamic-Informed Parcellation of fMRI Data in a Joint Detection Estimation Framework. Lecture Notes in Computer Science, 2012, 15, 180-188.	1.3	8
54	Variational Solution to the Joint Detection Estimation of Brain Activity in fMRI. Lecture Notes in Computer Science, 2011, 14, 260-268.	1.3	8

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55	Physiologically Informed Bayesian Analysis of ASL fMRI Data. Lecture Notes in Computer Science, 2014, , 37-48.	1.3	8
56	ICA-based sparse features recovery from fMRI datasets. , 2010, , .		7
57	Emergence of Î² and Î³ networks following multisensory training. NeuroImage, 2020, 206, 116313.	4.2	7
58	Bayesian Joint Detection-Estimation of Cerebral Vasoreactivity from ASL fMRI Data. Lecture Notes in Computer Science, 2013, 16, 616-624.	1.3	7
59	Iterative static field map estimation for offâ€resonance correction in nonâ€Cartesian susceptibility weighted imaging. Magnetic Resonance in Medicine, 2022, 88, 1592-1607.	3.0	7
60	Markovian high resolution spectral analysis. , 1999, , .		6
61	Outlier detection for robust region-based estimation of the hemodynamic response function in event-related fMRI. , 0, , .		6
62	Sensitivity analysis of parcellation in the joint detection-estimation of brain activity in fMRI. , 2008, , .		6
63	Modelling the neurovascular habituation effect on fMRI time series. , 2009, , .		6
64	Fast Adaptive Scene Sampling for Single-Photon 3D Lidar Images. , 2019, , .		6
65	Reducing the number of samples in spatiotemporal dMRI acquisition design. Magnetic Resonance in Medicine, 2019, 81, 3218-3233.	3.0	6
66	Learning the sampling density in 2D SPARKLING MRI acquisition for optimized image reconstruction. , 2021, , .		6
67	Joint Detection-Estimation of Brain Activity in fMRI using an Autoregressive Noise Model. , 0, , .		5
68	Multifractal analysis of Resting State Networks in functional MRI. , 2011, , .		5
69	HYR²PICS: Hybrid regularized reconstruction for combined parallel imaging and compressive sensing in MRI. , 2012, , .		5
70	Calibrationless Oscar-Based Image Reconstruction in Compressed Sensing Parallel MRI. , 2019, , .		5
71	Improved fMRI group studies based on spatially varying non-parametric BOLD signal modeling. , 2008, , .		4
72	Multivariate Spatial Gaussian Mixture Modeling for statistical clustering of hemodynamic parameters in functional MRI. , 2009, , .		4

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73	Fast bilinear extrapolation of 3D ising field partition function. application to fMRI image analysis.. , 2009, , .		4
74	Impact of the joint detection-estimation approach on random effects group studies in FMRI. , 2011, , .		4
75	Hemodynamic Estimation Based on Consensus Clustering. , 2013, , .		4
76	Bayesian bold and perfusion source separation and deconvolution from functional ASL imaging. , 2013, , .		4
77	Physiological models comparison for the analysis of ASL FMRI data. , 2015, , .		4
78	Spatially regularized multifractal analysis for fMRI data. , 2017, 2017, 3769-3772.		4
79	Analysis vs Synthesis-based Regularization for Combined Compressed Sensing and Parallel MRI Reconstruction at 7 Tesla. , 2018, , .		4
80	An empirical study of the maximum degree of undersampling in compressed sensing for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si4.gif" overflow="scroll"><mml:msubsup><mml:mrow><mml:mi>T</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> MRI. Magnetic Resonance Imaging, 2018, 53, 112-122.	1.8	4
81	Statistical Machine Learning and Compressed Sensing Approaches for Analytical Electron Tomography - Application to Phase Change Materials. Microscopy and Microanalysis, 2019, 25, 156-157.	0.4	4
82	Calibration-Less Multi-Coil Compressed Sensing Magnetic Resonance Image Reconstruction Based on OSCAR Regularization. Journal of Imaging, 2021, 7, 58.	3.0	4
83	LEADER-BASED MULTIFRACTAL ANALYSIS FOR EVI fMRI TIME SERIES: ONGOING vs TASK-RELATED BRAIN ACTIVITY. , 2007, , .		3
84	Parameter estimation for hybrid wavelet-total variation regularization. , 2011, , .		3
85	3D wavelet-based regularization for parallel MRI reconstruction: Impact on subject and group-level statistical sensitivity in fMRI. , 2011, , .		3
86	Gradient-based and wavelet-based compressed sensing approaches for highly undersampled tomographic datasets. Ultramicroscopy, 2021, 225, 113289.	1.9	3
87	Online MR image reconstruction for compressed sensing acquisition in T2* imaging. , 2019, , .		3
88	Voxelwise Multivariate Statistics and Brain-Wide Machine Learning Using the Full Diffusion Tensor. Lecture Notes in Computer Science, 2011, 14, 9-16.	1.3	3
89	Bayesian Joint Detection-Estimation of Brain Activity Using MCMC With a Gamma-Gaussian Mixture Prior Model. , 0, , .		2
90	Application and validation of spatial mixture modelling for the joint detection-estimation of brain activity in fMRI. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5218-22.	0.5	2

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91	Introduction to the Issue on fMRI Analysis for Human Brain Mapping. IEEE Journal on Selected Topics in Signal Processing, 2008, 2, 813-816.	10.8	2
92	A hierarchical Bayesian model for frame representation. , 2010, , .		2
93	Impact of the parallel imaging reconstruction algorithm on brain activity detection in fMRI. , 2010, , .		2
94	Image reconstruction from multiple sensors using stein's principle. Application to parallel MRI. , 2011, , .		2
95	Multi-subject Bayesian Joint Detection and Estimation in fMRI. , 2014, , .		2
96	Scale-Free Functional Connectivity Analysis from Source Reconstructed MEG Data. , 2018, , .		2
97	Adaptive experimental condition selection in event-related fMRI. , 2012, , .		1
98	Comparison of Features for Voxel-Based Analysis and Classification of Anatomical Neuroimaging Data. , 2013, , .		1
99	Variable Density Sampling based on Physically Plausible Gradient Waveform. Application to 3D MRI Angiography. , 2015, , .		1
100	Variational Physiologically Informed Solution to Hemodynamic and Perfusion Response Estimation from ASL fMRI Data. , 2015, , .		1
101	Multi-subject joint parcellation detection estimation in functional MRI. , 2016, , .		1
102	Impact of perceptual learning on resting-state fMRI connectivity: A supervised classification study. , 2016, , .		1
103	Multifractal Analysis for Cumulant-Based Epileptic Seizure Detection in Eeg Time Series. , 2019, , .		1
104	Comparison of Stochastic and Variational Solutions to ASL fMRI Data Analysis. Lecture Notes in Computer Science, 2015, , 85-92.	1.3	1
105	Regularized Doppler radar imaging for target identification in atmospheric clutter. , 0, , .		0
106	Wavelet-based parallel MRI regularization using bivariate sparsity promoting priors. , 2009, , .		0
107	Spatially adaptive subject level analyses improve random effects fMRI group studies. , 2010, , .		0
108	Bayesian variational approximation for the joint detection estimation of brain activity in fMRI. , 2011, , .		0

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109	Robust voxel-wise joint detection estimation of brain activity in fMRI. , 2012, , .		0
110	Supramodal processing in visual learning and plasticity. Multisensory Research, 2013, 26, 113-114.	1.1	0
111	Variational variable selection to assess experimental condition relevance in event-related fMRI. , 2013, , .		0
112	Hemodynamically informed parcellation of cerebral FMRI data. , 2014, , .		0
113	Decoding perceptual thresholds from MEG/EEG. , 2014, , .		0
114	Spatially regularized wavelet leader scale-free analysis of fMRI data. , 2018, , .		0
115	fMRI BOLD signal decomposition using a multivariate low-rank model. , 2019, , .		0
116	MC-PDNet: Deep Unrolled Neural Network For Multi-Contrast Mr Image Reconstruction From Undersampled K-Space Data. , 2022, , .		0
117	Hybrid Learning of Non-Cartesian K-Space Trajectory and Mr Image Reconstruction Networks. , 2022, , .		0