Bertrand Thirion

List of Publications by Year
in descending order

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103 papers	9,939 citations	76326 40 h-index	46799 89 g-index
107 all docs	107 docs citations	107 times ranked	12465 citing authors

#	Article	IF	Citations
1	Machine learning for neuroimaging with scikit-learn. Frontiers in Neuroinformatics, 2014, 8, 14.	2.5	1,422
2	Variability in the analysis of a single neuroimaging dataset by many teams. Nature, 2020, 582, 84-88.	27.8	634
3	Assessing and tuning brain decoders: Cross-validation, caveats, and guidelines. NeuroImage, 2017, 145, 166-179.	4.2	568
4	Deriving reproducible biomarkers from multi-site resting-state data: An Autism-based example. NeuroImage, 2017, 147, 736-745.	4.2	499
5	Best practices in data analysis and sharing in neuroimaging using MRI. Nature Neuroscience, 2017, 20, 299-303.	14.8	482
6	Analysis of a large fMRI cohort: Statistical and methodological issues for group analyses. NeuroImage, 2007, 35, 105-120.	4.2	481
7	An Automatic Valuation System in the Human Brain: Evidence from Functional Neuroimaging. Neuron, 2009, 64, 431-439.	8.1	370
8	Recruitment of an Area Involved in Eye Movements During Mental Arithmetic. Science, 2009, 324, 1583-1585.	12.6	367
9	Inverse retinotopy: Inferring the visual content of images from brain activation patterns. NeuroImage, 2006, 33, 1104-1116.	4.2	277
10	Which fMRI clustering gives good brain parcellations?. Frontiers in Neuroscience, 2014, 8, 167.	2.8	265
11	Seeing it all: Convolutional network layers map the function of the human visual system. NeuroImage, 2017, 152, 184-194.	4.2	248
12	Connectivityâ€based parcellation: Critique and implications. Human Brain Mapping, 2015, 36, 4771-4792.	3.6	246
13	Benchmarking functional connectome-based predictive models for resting-state fMRI. NeuroImage, 2019, 192, 115-134.	4.2	243
14	Deciphering Cortical Number Coding from Human Brain Activity Patterns. Current Biology, 2009, 19, 1608-1615.	3.9	216
15	Dealing with the shortcomings of spatial normalization: Multi-subject parcellation of fMRI datasets. Human Brain Mapping, 2006, 27, 678-693.	3.6	166
16	Early Maturation of the Linguistic Dorsal Pathway in Human Infants. Journal of Neuroscience, 2011, 31, 1500-1506.	3.6	149
17	A group model for stable multi-subject ICA on fMRI datasets. NeuroImage, 2010, 51, 288-299.	4.2	135
18	Robust clustering of massive tractography datasets. NeuroImage, 2011, 54, 1975-1993.	4.2	126

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19	Subspecialization within default mode nodes characterized in 10,000 UK Biobank participants. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12295-12300.	7.1	125
20	Multi-subject Dictionary Learning to Segment an Atlas of Brain Spontaneous Activity. Lecture Notes in Computer Science, 2011, 22, 562-573.	1.3	119
21	Total Variation Regularization for fMRI-Based Prediction of Behavior. IEEE Transactions on Medical Imaging, 2011, 30, 1328-1340.	8.9	113
22	Fast reproducible identification and large-scale databasing of individual functional cognitive networks. BMC Neuroscience, 2007, 8, 91.	1.9	112
23	A supervised clustering approach for fMRI-based inference of brain states. Pattern Recognition, 2012, 45, 2041-2049.	8.1	107
24	NeuroQuery, comprehensive meta-analysis of human brain mapping. ELife, 2020, 9, .	6.0	105
25	Individual Brain Charting, a high-resolution fMRI dataset for cognitive mapping. Scientific Data, 2018, 5, 180105.	5.3	100
26	Significant correlation between a set of genetic polymorphisms and a functional brain network revealed by feature selection and sparse Partial Least Squares. NeuroImage, 2012, 63, 11-24.	4.2	96
27	How machine learning is shaping cognitive neuroimaging. GigaScience, 2014, 3, 28.	6.4	95
28	Detection of Brain Functional-Connectivity Difference in Post-stroke Patients Using Group-Level Covariance Modeling. Lecture Notes in Computer Science, 2010, 13, 200-208.	1.3	93
29	Interoperable atlases of the human brain. NeuroImage, 2014, 99, 525-532.	4.2	78
30	A fully Bayesian approach to the parcel-based detection-estimation of brain activity in fMRI. NeuroImage, 2008, 41, 941-969.	4.2	76
31	An empirical comparison of surface-based and volume-based group studies in neuroimaging. NeuroImage, 2012, 63, 1443-1453.	4.2	76
32	Atlases of cognition with large-scale human brain mapping. PLoS Computational Biology, 2018, 14, e1006565.	3.2	74
33	Formal Models of the Network Co-occurrence Underlying Mental Operations. PLoS Computational Biology, 2016, 12, e1004994.	3.2	73
34	A disconnection account of Gerstmann syndrome: Functional neuroanatomy evidence. Annals of Neurology, 2009, 66, 654-662.	5.3	72
35	Detection of signal synchronizations in resting-state fMRI datasets. NeuroImage, 2006, 29, 321-327.	4.2	69
36	Fine-grain atlases of functional modes for fMRI analysis. NeuroImage, 2020, 221, 117126.	4.2	64

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37	Shared endo-phenotypes of default mode dysfunction in attention deficit/hyperactivity disorder and autism spectrum disorder. Translational Psychiatry, 2018, 8, 133.	4.8	59
38	Data-driven HRF estimation for encoding and decoding models. NeuroImage, 2015, 104, 209-220.	4.2	55
39	Multiscale Mining of fMRI Data with Hierarchical Structured Sparsity. SIAM Journal on Imaging Sciences, 2012, 5, 835-856.	2.2	50
40	Detecting outliers in high-dimensional neuroimaging datasets with robust covariance estimators. Medical Image Analysis, 2012, 16, 1359-1370.	11.6	49
41	Mapping the asynchrony of cortical maturation in the infant brain: A MRI multi-parametric clustering approach. NeuroImage, 2019, 185, 641-653.	4.2	49
42	Dynamical components analysis of fMRI data through kernel PCA. NeuroImage, 2003, 20, 34-49.	4.2	48
43	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
44	Inference and Prediction Diverge in Biomedicine. Patterns, 2020, 1, 100119.	5.9	42
45	Functional annotation of human cognitive states using deep graph convolution. NeuroImage, 2021, 231, 117847.	4.2	40
46	Very large fMRI study using the IMAGEN database: Sensitivityâ€“specificity and population effect modeling in relation to the underlying anatomy. NeuroImage, 2012, 61, 295-303.	4.2	39
47	Distinct alterations in Parkinson's medication-state and disease-state connectivity. NeuroImage: Clinical, 2017, 16, 575-585.	2.7	38
48	Different shades of default mode disturbance in schizophrenia: Subnodal covariance estimation in structure and function. Human Brain Mapping, 2018, 39, 644-661.	3.6	38
49	Combined permutation test and mixed-effect model for group average analysis in fMRI. Human Brain Mapping, 2006, 27, 402-410.	3.6	37
50	Joint prediction of multiple scores captures better individual traits from brain images. NeuroImage, 2017, 158, 145-154.	4.2	35
51	A Novel Sparse Graphical Approach for Multimodal Brain Connectivity Inference. Lecture Notes in Computer Science, 2012, 15, 707-714.	1.3	35
52	Inter-subject Registration of Functional Images: Do We Need Anatomical Images?. Frontiers in Neuroscience, 2018, 12, 64.	2.8	34
53	PyBIDS: Python tools for BIDS datasets. Journal of Open Source Software, 2019, 4, 1294.	4.6	32
54	Phase delays within visual cortex shape the response to steady-state visual stimulation. NeuroImage, 2011, 54, 1919-1929.	4.2	30

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55	A Framework for Inter-Subject Prediction of Functional Connectivity From Structural Networks. IEEE Transactions on Medical Imaging, 2013, 32, 2200-2214.	8.9	29
56	Graph-Based Inter-Subject Pattern Analysis of fMRI Data. PLoS ONE, 2014, 9, e104586.	2.5	29
57	Mixed-effect statistics for group analysis in fMRI: A nonparametric maximum likelihood approach. NeuroImage, 2007, 38, 501-510.	4.2	28
58	Schizophrenia as a Network Disease: Disruption of Emergent Brain Function in Patients with Auditory Hallucinations. PLoS ONE, 2013, 8, e50625.	2.5	28
59	Brainâ€based ranking of cognitive domains to predict schizophrenia. Human Brain Mapping, 2019, 40, 4487-4507.	3.6	25
60	Multiâ€scale network regression for brainâ€phenotype associations. Human Brain Mapping, 2020, 41, 2553-2566.	3.6	24
61	Population modeling with machine learning can enhance measures of mental health. GigaScience, 2021, 10, .	6.4	23
62	How to remove or control confounds in predictive models, with applications to brain biomarkers. GigaScience, 2022, 11, .	6.4	23
63	Feature characterization in fMRI data: the Information Bottleneck approach. Medical Image Analysis, 2004, 8, 403-419.	11.6	21
64	Individual Brain Charting dataset extension, second release of high-resolution fMRI data for cognitive mapping. Scientific Data, 2020, 7, 353.	5.3	21
65	Brain topography beyond parcellations: Local gradients of functional maps. NeuroImage, 2021, 229, 117706.	4.2	21
66	FReM â€“ Scalable and stable decoding with fast regularized ensemble of models. NeuroImage, 2018, 180, 160-172.	4.2	19
67	Population shrinkage of covariance (PoSCE) for better individual brain functional-connectivity estimation. Medical Image Analysis, 2019, 54, 138-148.	11.6	19
68	Patterns of autism symptoms: hidden structure in the ADOS and ADI-R instruments. Translational Psychiatry, 2020, 10, 257.	4.8	19
69	Stochastic Subsampling for Factorizing Huge Matrices. IEEE Transactions on Signal Processing, 2018, 66, 113-128.	5.3	16
70	SmartPulse, a machine learning approach for calibrationâ€free dynamic RF shimming: Preliminary study in a clinical environment. Magnetic Resonance in Medicine, 2019, 82, 2016-2031.	3.0	16
71	Hyperfrontality and hypoconnectivity during refreshing in schizophrenia. Psychiatry Research - Neuroimaging, 2013, 211, 226-233.	1.8	14
72	Robust regression for large-scale neuroimaging studies. NeuroImage, 2015, 111, 431-441.	4.2	14

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73	Patterns of schizophrenia symptoms: hidden structure in the PANSS questionnaire. Translational Psychiatry, 2018, 8, 237.	4.8	14
74	Randomized parcellation based inference. NeuroImage, 2014, 89, 203-215.	4.2	13
75	High Level Group Analysis of FMRI Data Based on Dirichlet Process Mixture Models. Lecture Notes in Computer Science, 2007, 20, 482-494.	1.3	13
76	Synthetic FLAIR as a Substitute for FLAIR Sequence in Acute Ischemic Stroke. Radiology, 2022, 303, 153-159.	7.3	13
77	Extracting representations of cognition across neuroimaging studies improves brain decoding. PLoS Computational Biology, 2021, 17, e1008795.	3.2	12
78	An empirical evaluation of functional alignment using inter-subject decoding. NeuroImage, 2021, 245, 118683.	4.2	12
79	Robust Statistics for Nonparametric Group Analysis in fMRI. , 0, , .		11
80	Machine learning patterns for neuroimaging-genetic studies in the cloud. Frontiers in Neuroinformatics, 2014, 8, 31.	2.5	11
81	Subjectâ€specific segregation of functional territories based on deep phenotyping. Human Brain Mapping, 2021, 42, 841-870.	3.6	11
82	Multi-subject MEG/EEG source imaging with sparse multi-task regression. NeuroImage, 2020, 220, 116847.	4.2	11
83	Tissue outcome prediction in hyperacute ischemic stroke: Comparison of machine learning models. Journal of Cerebral Blood Flow and Metabolism, 2021, 41, 3085-3096.	4.3	10
84	Finding Landmarks in the Functional Brain: Detection and Use for Group Characterization. Lecture Notes in Computer Science, 2005, 8, 476-483.	1.3	10
85	Cohort-Level Brain Mapping: Learning Cognitive Atoms to Single Out Specialized Regions. Lecture Notes in Computer Science, 2013, 23, 438-449.	1.3	10
86	Neuroimaging Research: From Null-Hypothesis Falsification to Out-of-Sample Generalization. Educational and Psychological Measurement, 2017, 77, 868-880.	2.4	8
87	Decoding fMRI activity in the time domain improves classification performance. NeuroImage, 2018, 180, 203-210.	4.2	7
88	Local Optimal Transport for Functional Brain Template Estimation. Lecture Notes in Computer Science, 2019, , 237-248.	1.3	7
89	Recursive Nearest Agglomeration (ReNA): Fast Clustering for Approximation of Structured Signals. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2019, 41, 669-681.	13.9	7
90	Decoding Visual Percepts Induced by Word Reading with fMRI. , 2012, , .		6

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91	The functional database of the ARCHI project: Potential and perspectives. NeuroImage, 2019, 197, 527-543.	4.2	6
92	Improving Accuracy and Power with Transfer Learning Using a Meta-analytic Database. Lecture Notes in Computer Science, 2012, 15, 248-255.	1.3	6
93	Improving Sparse Recovery on Structured Images with Bagged Clustering. , 2015, , .		5
94	From deep brain phenotyping to functional atlasing. Current Opinion in Behavioral Sciences, 2021, 40, 201-212.	3.9	5
95	Imaging Genetics: Bio-Informatics and Bio-Statistics Challenges. , 2010, , 101-110.		5
96	Probabilistic atlas and geometric variability estimation to drive tissue segmentation. Statistics in Medicine, 2014, 33, 3576-3599.	1.6	4
97	Accurate Definition of Brain Regions Position through the Functional Landmark Approach. Lecture Notes in Computer Science, 2010, 13, 241-248.	1.3	3
98	Tackling the Complexity of Lesion-Symptoms Mapping: How to Bridge the Gap Between Data Scientists and Clinicians?. Acta Neurochirurgica Supplementum, 2022, 134, 195-203.	1.0	3
99	Comprehensive decoding mental processes from Web repositories of functional brain images. Scientific Reports, 2022, 12, 7050.	3.3	3
100	Bayesian estimation of probabilistic atlas for tissue segmentation. Irbm, 2014, 35, 27-32.	5.6	2
101	Decoding with confidence: Statistical control on decoder maps. NeuroImage, 2021, 234, 117921.	4.2	2
102	Functional Magnetic Resonance Imaging Data Augmentation Through Conditional ICA. Lecture Notes in Computer Science, 2021, , 491-500.	1.3	2
103	Towards a faster randomized parcellation based inference. , 2017, , .		1