Gael Varoquaux

List of Publications by Year
in descending order

124 papers	18,592 citations	81900 39 h-index	27406 106 g-index
139 all docs	139 docs citations	139 times ranked	28865 citing authors

#	ARTICLE	IF	CITATIONS
1	Encoding High-Cardinality String Categorical Variables. IEEE Transactions on Knowledge and Data Engineering, 2022, 34, 1164-1176.	5.7	42
2	How to remove or control confounds in predictive models, with applications to brain biomarkers. GigaScience, 2022, 11, .	6.4	23
3	Analytics on Non-Normalized Data Sources: More Learning, Rather Than More Cleaning. IEEE Access, 2022, 10, 42420-42431.	4.2	2
4	Benchmarking missing-values approaches for predictive models on health databases. GigaScience, 2022, 11, .	6.4	11
5	Machine learning for medical imaging: methodological failures and recommendations for the future. Npj Digital Medicine, 2022, 5, 48.	10.9	179
6	Insights from an autism imaging biomarker challenge: Promises and threats to biomarker discovery. NeuroImage, 2022, 255, 119171.	4.2	24
7	Comprehensive decoding mental processes from Web repositories of functional brain images. Scientific Reports, 2022, 12, 7050.	3.3	3
8	Understanding Brain Network Dynamics in Autism Begs for Generalization. Biological Psychiatry, 2022, 91, 916-917.	1.3	0
9	Predicting future cognitive decline from non-brain and multimodal brain imaging data in healthy and pathological aging. Neurobiology of Aging, 2022, 118, 55-65.	3.1	7
10	Extracting representations of cognition across neuroimaging studies improves brain decoding. PLoS Computational Biology, 2021, 17, e1008795.	3.2	12
11	Decoding with confidence: Statistical control on decoder maps. NeuroImage, 2021, 234, 117921.	4.2	2
12	Association Between FIASMAs and Reduced Risk of Intubation or Death in Individuals Hospitalized for Severe COVIDâ€19: An Observational Multicenter Study. Clinical Pharmacology and Therapeutics, 2021, 110, 1498-1511.	4.7	59
13	Centering inclusivity in the design of online conferencesâ€"An OHBMâ€"Open Science perspective. GigaScience, 2021, 10, .	6.4	14
14	Preventing dataset shift from breaking machine-learning biomarkers. GigaScience, 2021, 10, .	6.4	39
15	Subjectâ€specific segregation of functional territories based on deep phenotyping. Human Brain Mapping, 2021, 42, 841-870.	3.6	11
16	Population modeling with machine learning can enhance measures of mental health. GigaScience, 2021, 10, .	6.4	23
17	Numerical uncertainty in analytical pipelines lead to impactful variability in brain networks. PLoS ONE, 2021, 16, e0250755.	2.5	4
18	Establishment of Best Practices for Evidence for Prediction. JAMA Psychiatry, 2020, 77, 534.	11.0	422

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19	Individual Brain Charting dataset extension, second release of high-resolution fMRI data for cognitive mapping. Scientific Data, 2020, 7, 353.	5.3	21
20	Fine-grain atlases of functional modes for fMRI analysis. NeuroImage, 2020, 221, 117126.	4.2	64
21	Predictive regression modeling with MEG/EEG: from source power to signals and cognitive states. NeuroImage, 2020, 222, 116893.	4.2	56
22	NeuroQuery, comprehensive meta-analysis of human brain mapping. ELife, 2020, 9, .	6.0	105
23	Combining magnetoencephalography with magnetic resonance imaging enhances learning of surrogate-biomarkers. ELife, 2020, 9, .	6.0	64
24	Brainâ€based ranking of cognitive domains to predict schizophrenia. Human Brain Mapping, 2019, 40, 4487-4507.	3.6	25
25	Population shrinkage of covariance (PoSCE) for better individual brain functional-connectivity estimation. Medical Image Analysis, 2019, 54, 138-148.	11.6	19
26	Benchmarking functional connectome-based predictive models for resting-state fMRI. NeuroImage, 2019, 192, 115-134.	4.2	243
27	Computational and Informatic Advances for Reproducible Data Analysis in Neuroimaging. Annual Review of Biomedical Data Science, 2019, 2, 119-138.	6.5	35
28	Predictive models avoid excessive reductionism in cognitive neuroimaging. Current Opinion in Neurobiology, 2019, 55, 1-6.	4.2	48
29	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
30	Cross-validation failure: Small sample sizes lead to large error bars. NeuroImage, 2018, 180, 68-77.	4.2	440
31	FReM â€" Scalable and stable decoding with fast regularized ensemble of models. NeuroImage, 2018, 180, 160-172.	4.2	19
32	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
33	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
34	Atlases of cognition with large-scale human brain mapping. PLoS Computational Biology, 2018, 14, e1006565.	3.2	74
35	Similarity encoding for learning with dirty categorical variables. Machine Learning, 2018, 107, 1477-1494.	5.4	132
36	Inter-subject Registration of Functional Images: Do We Need Anatomical Images?. Frontiers in Neuroscience, 2018, 12, 64.	2.8	34

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37	Individual Brain Charting, a high-resolution fMRI dataset for cognitive mapping. Scientific Data, 2018, 5, 180105.	5.3	100
38	Using and understanding cross-validation strategies. Perspectives on Saeb etÂal.. GigaScience, 2017, 6, 1-6.	6.4	97
39	Distinct alterations in Parkinson's medication-state and disease-state connectivity. NeuroImage: Clinical, 2017, 16, 575-585.	2.7	38
40	Towards a faster randomized parcellation based inference. , 2017, , .		1
41	Multi-output predictions from neuroimaging: assessing reduced-rank linear models. , 2017, , .		4
42	Neuroimaging Research: From Null-Hypothesis Falsification to Out-of-Sample Generalization. Educational and Psychological Measurement, 2017, 77, 868-880.	2.4	8
43	Joint prediction of multiple scores captures better individual traits from brain images. NeuroImage, 2017, 158, 145-154.	4.2	35
44	Seeing it all: Convolutional network layers map the function of the human visual system. NeuroImage, 2017, 152, 184-194.	4.2	248
45	Assessing and tuning brain decoders: Cross-validation, caveats, and guidelines. NeuroImage, 2017, 145, 166-179.	4.2	568
46	Predicting brain-age from multimodal imaging data captures cognitive impairment. NeuroImage, 2017, 148, 179-188.	4.2	407
47	Deriving reproducible biomarkers from multi-site resting-state data: An Autism-based example. NeuroImage, 2017, 147, 736-745.	4.2	499
48	Hierarchical Region-Network Sparsity for High-Dimensional Inference in Brain Imaging. Lecture Notes in Computer Science, 2017, 10265, 323-335.	1.3	8
49	BIDS apps: Improving ease of use, accessibility, and reproducibility of neuroimaging data analysis methods. PLoS Computational Biology, 2017, 13, e1005209.	3.2	218
50	Population-Shrinkage of Covariance to Estimate Better Brain Functional Connectivity. Lecture Notes in Computer Science, 2017, , 460-468.	1.3	1
51	Transmodal Learning of Functional Networks for Alzheimer's Disease Prediction. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 1204-1213.	10.8	24
52	The brain imaging data structure, a format for organizing and describing outputs of neuroimaging experiments. Scientific Data, 2016, 3, 160044.	5.3	1,038
53	Identification of Mood-Relevant Brain Connections Using a Continuous, Subject-Driven Rumination Paradigm. Cerebral Cortex, 2016, 26, 933-942.	2.9	26
54	NeuroVault.org: A repository for sharing unthresholded statistical maps, parcellations, and atlases of the human brain. NeuroImage, 2016, 124, 1242-1244.	4.2	70

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55	Formal Models of the Network Co-occurrence Underlying Mental Operations. PLoS Computational Biology, 2016, 12, e1004994.	3.2	73
56	Speeding-Up Model-Selection in Graphnet via Early-Stopping and Univariate Feature-Screening. , 2015, , .		4
57	Connectivityâ€based parcellation: Critique and implications. Human Brain Mapping, 2015, 36, 4771-4792.	3.6	246
58	NeuroVault.org: a web-based repository for collecting and sharing unthresholded statistical maps of the human brain. Frontiers in Neuroinformatics, 2015, 9, 8.	2.5	482
59	Robust regression for large-scale neuroimaging studies. NeuroImage, 2015, 111, 431-441.	4.2	14
60	Improving Sparse Recovery on Structured Images with Bagged Clustering. , 2015, , .		5
61	Convex relaxations of penalties for sparse correlated variables with bounded total variation. Machine Learning, 2015, 100, 533-553.	5.4	3
62	Grouping Total Variation and Sparsity: Statistical Learning with Segmenting Penalties. Lecture Notes in Computer Science, 2015, , 685-693.	1.3	8
63	Integrating Multimodal Priors in Predictive Models for the Functional Characterization of Alzheimerâ€™s Disease. Lecture Notes in Computer Science, 2015, , 207-214.	1.3	5
64	Machine learning for neuroimaging with scikit-learn. Frontiers in Neuroinformatics, 2014, 8, 14.	2.5	1,422
65	Machine learning patterns for neuroimaging-genetic studies in the cloud. Frontiers in Neuroinformatics, 2014, 8, 31.	2.5	11
66	Which fMRI clustering gives good brain parcellations?. Frontiers in Neuroscience, 2014, 8, 167.	2.8	265
67	How machine learning is shaping cognitive neuroimaging. GigaScience, 2014, 3, 28.	6.4	95
68	Transport on Riemannian Manifold for Functional Connectivity-Based Classification. Lecture Notes in Computer Science, 2014, 17, 405-412.	1.3	22
69	Benchmarking solvers for TV-ℓ<inf>1</inf> least-squares and logistic regression in brain imaging. , 2014, , .		12
70	Group-PCA for very large fMRI datasets. NeuroImage, 2014, 101, 738-749.	4.2	218
71	Randomized parcellation based inference. NeuroImage, 2014, 89, 203-215.	4.2	13
72	Deriving a Multi-subject Functional-Connectivity Atlas to Inform Connectome Estimation. Lecture Notes in Computer Science, 2014, 17, 185-192.	1.3	4

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73	Principal Component Regression Predicts Functional Responses across Individuals. Lecture Notes in Computer Science, 2014, 17, 741-748.	1.3	3
74	A Framework for Inter-Subject Prediction of Functional Connectivity From Structural Networks. IEEE Transactions on Medical Imaging, 2013, 32, 2200-2214.	8.9	29
75	Robust Group-Level Inference in Neuroimaging Genetic Studies. , 2013, , .		0
76	Hyperfrontality and hypoconnectivity during refreshing in schizophrenia. Psychiatry Research - Neuroimaging, 2013, 211, 226-233.	1.8	14
77	Learning and comparing functional connectomes across subjects. NeuroImage, 2013, 80, 405-415.	4.2	185
78	Identifying Predictive Regions from fMRI with TV-L1 Prior. , 2013, , .		36
79	Hemodynamic Estimation Based on Consensus Clustering. , 2013, , .		4
80	A Comparison of Metrics and Algorithms for Fiber Clustering. , 2013, , .		9
81	Spatial vs. Temporal Features in ICA of Resting-State fMRI â€" A Quantitative and Qualitative Investigation in the Context of Response Inhibition. PLoS ONE, 2013, 8, e66572.	2.5	25
82	A Novel Sparse Group Gaussian Graphical Model for Functional Connectivity Estimation. Lecture Notes in Computer Science, 2013, 23, 256-267.	1.3	26
83	Cohort-Level Brain Mapping: Learning Cognitive Atoms to Single Out Specialized Regions. Lecture Notes in Computer Science, 2013, 23, 438-449.	1.3	10
84	Implications of Inconsistencies between fMRI and dMRI on Multimodal Connectivity Estimation. Lecture Notes in Computer Science, 2013, 16, 652-659.	1.3	12
85	Enhancing the Reproducibility of Group Analysis with Randomized Brain Parcellations. Lecture Notes in Computer Science, 2013, 16, 591-598.	1.3	4
86	Extracting Brain Regions from Rest fMRI with Total-Variation Constrained Dictionary Learning. Lecture Notes in Computer Science, 2013, 16, 607-615.	1.3	34
87	Scale-free and multifractal time dynamics of fMRI signals during rest and task. Frontiers in Physiology, 2012, 3, 186.	2.8	157
88	Decoding Visual Percepts Induced by Word Reading with fMRI. , 2012, , .		6
89	Beyond Brain Reading: Randomized Sparsity and Clustering to Simultaneously Predict and Identify. Lecture Notes in Computer Science, 2012, , 9-16.	1.3	3
90	Detecting outliers in high-dimensional neuroimaging datasets with robust covariance estimators. Medical Image Analysis, 2012, 16, 1359-1370.	11.6	49

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91	Markov models for fMRI correlation structure: Is brain functional connectivity small world, or decomposable into networks?. Journal of Physiology (Paris), 2012, 106, 212-221.	2.1	27
92	Connectivity-informed Sparse Classifiers for fMRI Brain Decoding. , 2012, , .		6
93	On Spatial Selectivity and Prediction across Conditions with fMRI. , 2012, , .		0
94	Improved Brain Pattern Recovery through Ranking Approaches. , 2012, , .		3
95	Changing computational research. The challenges ahead. Source Code for Biology and Medicine, 2012, 7, 2.	1.7	8
96	<i>In Situ</i> Synchrotron Microtomography Reveals Multiple Reaction Pathways During Soda–Lime Glass Synthesis. Journal of the American Ceramic Society, 2012, 95, 1504-1507.	3.8	22
97	PyXNAT: XNAT in Python. Frontiers in Neuroinformatics, 2012, 6, 12.	2.5	35
98	A supervised clustering approach for fMRI-based inference of brain states. Pattern Recognition, 2012, 45, 2041-2049.	8.1	107
99	A Novel Sparse Graphical Approach for Multimodal Brain Connectivity Inference. Lecture Notes in Computer Science, 2012, 15, 707-714.	1.3	35
100	Improving Accuracy and Power with Transfer Learning Using a Meta-analytic Database. Lecture Notes in Computer Science, 2012, 15, 248-255.	1.3	6
101	A Comparative Study of Algorithms for Intra- and Inter-subjects fMRI Decoding. Lecture Notes in Computer Science, 2012, , 1-8.	1.3	2
102	Non-parametric Density Modeling and Outlier-Detection in Medical Imaging Datasets. Lecture Notes in Computer Science, 2012, , 210-217.	1.3	1
103	Learning to Rank from Medical Imaging Data. Lecture Notes in Computer Science, 2012, , 234-241.	1.3	19
104	Relating Brain Functional Connectivity to Anatomical Connections: Model Selection. Lecture Notes in Computer Science, 2012, , 178-185.	1.3	4
105	Statistical Learning for Resting-State fMRI: Successes and Challenges. Lecture Notes in Computer Science, 2012, , 172-177.	1.3	1
106	Mayavi: 3D Visualization of Scientific Data. Computing in Science and Engineering, 2011, 13, 40-51.	1.2	512
107	The NumPy Array: A Structure for Efficient Numerical Computation. Computing in Science and Engineering, 2011, 13, 22-30.	1.2	7,797
108	Total Variation Regularization for fMRI-Based Prediction of Behavior. IEEE Transactions on Medical Imaging, 2011, 30, 1328-1340.	8.9	113

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109	Multifractal analysis of Resting State Networks in functional MRI. , 2011, , .		5
110	A Probabilistic Framework to Infer Brain Functional Connectivity from Anatomical Connections. Lecture Notes in Computer Science, 2011, 22, 296-307.	1.3	20
111	Multi-subject Dictionary Learning to Segment an Atlas of Brain Spontaneous Activity. Lecture Notes in Computer Science, 2011, 22, 562-573.	1.3	119
112	Detecting Outlying Subjects in High-Dimensional Neuroimaging Datasets with Regularized Minimum Covariance Determinant. Lecture Notes in Computer Science, 2011, 14, 264-271.	1.3	12
113	Connectivity-Informed fMRI Activation Detection. Lecture Notes in Computer Science, 2011, 14, 285-292.	1.3	14
114	ICA-based sparse features recovery from fMRI datasets. , 2010, , .		7
115	Total Variation Regularization Enhances Regression-Based Brain Activity Prediction. , 2010, , .		3
116	A group model for stable multi-subject ICA on fMRI datasets. NeuroImage, 2010, 51, 288-299.	4.2	135
117	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
118	Accurate Definition of Brain Regions Position through the Functional Landmark Approach. Lecture Notes in Computer Science, 2010, 13, 241-248.	1.3	3
119	How to estimate the differential acceleration in a two-species atom interferometer to test the equivalence principle. New Journal of Physics, 2009, 11, 113010.	2.9	48
120	Agile Computer Control of a Complex Experiment. Computing in Science and Engineering, 2008, 10, 55-59.	1.2	4
121	Title is missing!. Physics-Uspekhi, 2008, 51, 205.	2.2	4
122	Youthful spirit. Nature Physics, 2007, 3, 287-287.	16.7	0
123	I.C.E.: a transportable atomic inertial sensor for test in microgravity. Applied Physics B: Lasers and Optics, 2006, 84, 673-681.	2.2	44
124	Loading and plotting of cortical surface representations in Nilearn. Research Ideas and Outcomes, 0, 3, .	1.0	9