

Gael Varoquaux

List of Publications by Year in descending order

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Version: 2024-02-01

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	The NumPy Array: A Structure for Efficient Numerical Computation. <i>Computing in Science and Engineering</i> , 2011, 13, 22-30.	1.2	7,797
2	Machine learning for neuroimaging with scikit-learn. <i>Frontiers in Neuroinformatics</i> , 2014, 8, 14.	2.5	1,422
3	The brain imaging data structure, a format for organizing and describing outputs of neuroimaging experiments. <i>Scientific Data</i> , 2016, 3, 160044.	5.3	1,038
4	Assessing and tuning brain decoders: Cross-validation, caveats, and guidelines. <i>NeuroImage</i> , 2017, 145, 166-179.	4.2	568
5	Mayavi: 3D Visualization of Scientific Data. <i>Computing in Science and Engineering</i> , 2011, 13, 40-51.	1.2	512
6	Deriving reproducible biomarkers from multi-site resting-state data: An Autism-based example. <i>NeuroImage</i> , 2017, 147, 736-745.	4.2	499
7	NeuroVault.org: a web-based repository for collecting and sharing unthresholded statistical maps of the human brain. <i>Frontiers in Neuroinformatics</i> , 2015, 9, 8.	2.5	482
8	Cross-validation failure: Small sample sizes lead to large error bars. <i>NeuroImage</i> , 2018, 180, 68-77.	4.2	440
9	Establishment of Best Practices for Evidence for Prediction. <i>JAMA Psychiatry</i> , 2020, 77, 534.	11.0	422
10	Predicting brain-age from multimodal imaging data captures cognitive impairment. <i>NeuroImage</i> , 2017, 148, 179-188.	4.2	407
11	Which fMRI clustering gives good brain parcellations?. <i>Frontiers in Neuroscience</i> , 2014, 8, 167.	2.8	265
12	Seeing it all: Convolutional network layers map the function of the human visual system. <i>NeuroImage</i> , 2017, 152, 184-194.	4.2	248
13	Connectivity-based parcellation: Critique and implications. <i>Human Brain Mapping</i> , 2015, 36, 4771-4792.	3.6	246
14	Benchmarking functional connectome-based predictive models for resting-state fMRI. <i>NeuroImage</i> , 2019, 192, 115-134.	4.2	243
15	Group-PCA for very large fMRI datasets. <i>NeuroImage</i> , 2014, 101, 738-749.	4.2	218
16	BIDS apps: Improving ease of use, accessibility, and reproducibility of neuroimaging data analysis methods. <i>PLoS Computational Biology</i> , 2017, 13, e1005209.	3.2	218
17	Learning and comparing functional connectomes across subjects. <i>NeuroImage</i> , 2013, 80, 405-415.	4.2	185
18	Machine learning for medical imaging: methodological failures and recommendations for the future. <i>Npj Digital Medicine</i> , 2022, 5, 48.	10.9	179

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19	Scale-free and multifractal time dynamics of fMRI signals during rest and task. <i>Frontiers in Physiology</i> , 2012, 3, 186.	2.8	157
20	A group model for stable multi-subject ICA on fMRI datasets. <i>NeuroImage</i> , 2010, 51, 288-299.	4.2	135
21	Similarity encoding for learning with dirty categorical variables. <i>Machine Learning</i> , 2018, 107, 1477-1494.	5.4	132
22	Subspecialization within default mode nodes characterized in 10,000 UK Biobank participants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 12295-12300.	7.1	125
23	Multi-subject Dictionary Learning to Segment an Atlas of Brain Spontaneous Activity. <i>Lecture Notes in Computer Science</i> , 2011, 22, 562-573.	1.3	119
24	Total Variation Regularization for fMRI-Based Prediction of Behavior. <i>IEEE Transactions on Medical Imaging</i> , 2011, 30, 1328-1340.	8.9	113
25	A supervised clustering approach for fMRI-based inference of brain states. <i>Pattern Recognition</i> , 2012, 45, 2041-2049.	8.1	107
26	NeuroQuery, comprehensive meta-analysis of human brain mapping. <i>ELife</i> , 2020, 9, .	6.0	105
27	Individual Brain Charting, a high-resolution fMRI dataset for cognitive mapping. <i>Scientific Data</i> , 2018, 5, 180105.	5.3	100
28	Using and understanding cross-validation strategies. <i>Perspectives on Saeb etÂal.</i> . <i>GigaScience</i> , 2017, 6, 1-6.	6.4	97
29	How machine learning is shaping cognitive neuroimaging. <i>GigaScience</i> , 2014, 3, 28.	6.4	95
30	Detection of Brain Functional-Connectivity Difference in Post-stroke Patients Using Group-Level Covariance Modeling. <i>Lecture Notes in Computer Science</i> , 2010, 13, 200-208.	1.3	93
31	Atlases of cognition with large-scale human brain mapping. <i>PLoS Computational Biology</i> , 2018, 14, e1006565.	3.2	74
32	Formal Models of the Network Co-occurrence Underlying Mental Operations. <i>PLoS Computational Biology</i> , 2016, 12, e1004994.	3.2	73
33	NeuroVault.org: A repository for sharing unthresholded statistical maps, parcellations, and atlases of the human brain. <i>NeuroImage</i> , 2016, 124, 1242-1244.	4.2	70
34	Fine-grain atlases of functional modes for fMRI analysis. <i>NeuroImage</i> , 2020, 221, 117126.	4.2	64
35	Combining magnetoencephalography with magnetic resonance imaging enhances learning of surrogate-biomarkers. <i>ELife</i> , 2020, 9, .	6.0	64
36	Association Between FIASMAs and Reduced Risk of Intubation or Death in Individuals Hospitalized for Severe COVID-19: An Observational Multicenter Study. <i>Clinical Pharmacology and Therapeutics</i> , 2021, 110, 1498-1511.	4.7	59

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37	Predictive regression modeling with MEG/EEG: from source power to signals and cognitive states. <i>NeuroImage</i> , 2020, 222, 116893.	4.2	56
38	Detecting outliers in high-dimensional neuroimaging datasets with robust covariance estimators. <i>Medical Image Analysis</i> , 2012, 16, 1359-1370.	11.6	49
39	How to estimate the differential acceleration in a two-species atom interferometer to test the equivalence principle. <i>New Journal of Physics</i> , 2009, 11, 113010.	2.9	48
40	Predictive models avoid excessive reductionism in cognitive neuroimaging. <i>Current Opinion in Neurobiology</i> , 2019, 55, 1-6.	4.2	48
41	I.C.E.: a transportable atomic inertial sensor for test in microgravity. <i>Applied Physics B: Lasers and Optics</i> , 2006, 84, 673-681.	2.2	44
42	Encoding High-Cardinality String Categorical Variables. <i>IEEE Transactions on Knowledge and Data Engineering</i> , 2022, 34, 1164-1176.	5.7	42
43	Preventing dataset shift from breaking machine-learning biomarkers. <i>GigaScience</i> , 2021, 10, .	6.4	39
44	Distinct alterations in Parkinson's medication-state and disease-state connectivity. <i>NeuroImage: Clinical</i> , 2017, 16, 575-585.	2.7	38
45	Different shades of default mode disturbance in schizophrenia: Subnodal covariance estimation in structure and function. <i>Human Brain Mapping</i> , 2018, 39, 644-661.	3.6	38
46	Identifying Predictive Regions from fMRI with TV-L1 Prior. , 2013, , .		36
47	PyXNAT: XNAT in Python. <i>Frontiers in Neuroinformatics</i> , 2012, 6, 12.	2.5	35
48	Joint prediction of multiple scores captures better individual traits from brain images. <i>NeuroImage</i> , 2017, 158, 145-154.	4.2	35
49	Computational and Informatic Advances for Reproducible Data Analysis in Neuroimaging. <i>Annual Review of Biomedical Data Science</i> , 2019, 2, 119-138.	6.5	35
50	A Novel Sparse Graphical Approach for Multimodal Brain Connectivity Inference. <i>Lecture Notes in Computer Science</i> , 2012, 15, 707-714.	1.3	35
51	Inter-subject Registration of Functional Images: Do We Need Anatomical Images?. <i>Frontiers in Neuroscience</i> , 2018, 12, 64.	2.8	34
52	Extracting Brain Regions from Rest fMRI with Total-Variation Constrained Dictionary Learning. <i>Lecture Notes in Computer Science</i> , 2013, 16, 607-615.	1.3	34
53	A Framework for Inter-Subject Prediction of Functional Connectivity From Structural Networks. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 2200-2214.	8.9	29
54	Markov models for fMRI correlation structure: Is brain functional connectivity small world, or decomposable into networks?. <i>Journal of Physiology (Paris)</i> , 2012, 106, 212-221.	2.1	27

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55	Identification of Mood-Relevant Brain Connections Using a Continuous, Subject-Driven Rumination Paradigm. <i>Cerebral Cortex</i> , 2016, 26, 933-942.	2.9	26
56	A Novel Sparse Group Gaussian Graphical Model for Functional Connectivity Estimation. <i>Lecture Notes in Computer Science</i> , 2013, 23, 256-267.	1.3	26
57	Spatial vs. Temporal Features in ICA of Resting-State fMRI – A Quantitative and Qualitative Investigation in the Context of Response Inhibition. <i>PLoS ONE</i> , 2013, 8, e66572.	2.5	25
58	Brain-based ranking of cognitive domains to predict schizophrenia. <i>Human Brain Mapping</i> , 2019, 40, 4487-4507.	3.6	25
59	Transmodal Learning of Functional Networks for Alzheimer's Disease Prediction. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2016, 10, 1204-1213.	10.8	24
60	Insights from an autism imaging biomarker challenge: Promises and threats to biomarker discovery. <i>NeuroImage</i> , 2022, 255, 119171.	4.2	24
61	Population modeling with machine learning can enhance measures of mental health. <i>GigaScience</i> , 2021, 10, .	6.4	23
62	How to remove or control confounds in predictive models, with applications to brain biomarkers. <i>GigaScience</i> , 2022, 11, .	6.4	23
63	<i>In Situ</i> Synchrotron Microtomography Reveals Multiple Reaction Pathways During Soda-Lime Glass Synthesis. <i>Journal of the American Ceramic Society</i> , 2012, 95, 1504-1507.	3.8	22
64	Transport on Riemannian Manifold for Functional Connectivity-Based Classification. <i>Lecture Notes in Computer Science</i> , 2014, 17, 405-412.	1.3	22
65	Individual Brain Charting dataset extension, second release of high-resolution fMRI data for cognitive mapping. <i>Scientific Data</i> , 2020, 7, 353.	5.3	21
66	A Probabilistic Framework to Infer Brain Functional Connectivity from Anatomical Connections. <i>Lecture Notes in Computer Science</i> , 2011, 22, 296-307.	1.3	20
67	FReM – Scalable and stable decoding with fast regularized ensemble of models. <i>NeuroImage</i> , 2018, 180, 160-172.	4.2	19
68	Population shrinkage of covariance (PoSCE) for better individual brain functional-connectivity estimation. <i>Medical Image Analysis</i> , 2019, 54, 138-148.	11.6	19
69	Learning to Rank from Medical Imaging Data. <i>Lecture Notes in Computer Science</i> , 2012, , 234-241.	1.3	19
70	Hyperfrontality and hypoconnectivity during refreshing in schizophrenia. <i>Psychiatry Research - Neuroimaging</i> , 2013, 211, 226-233.	1.8	14
71	Robust regression for large-scale neuroimaging studies. <i>NeuroImage</i> , 2015, 111, 431-441.	4.2	14
72	Centering inclusivity in the design of online conferences – An OHBM – Open Science perspective. <i>GigaScience</i> , 2021, 10, .	6.4	14

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73	Connectivity-Informed fMRI Activation Detection. Lecture Notes in Computer Science, 2011, 14, 285-292.	1.3	14
74	Randomized parcellation based inference. NeuroImage, 2014, 89, 203-215.	4.2	13
75	Benchmarking solvers for TV- λ least-squares and logistic regression in brain imaging. , 2014, , .		12
76	Extracting representations of cognition across neuroimaging studies improves brain decoding. PLoS Computational Biology, 2021, 17, e1008795.	3.2	12
77	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
78	Implications of Inconsistencies between fMRI and dMRI on Multimodal Connectivity Estimation. Lecture Notes in Computer Science, 2013, 16, 652-659.	1.3	12
79	Machine learning patterns for neuroimaging-genetic studies in the cloud. Frontiers in Neuroinformatics, 2014, 8, 31.	2.5	11
80	Subject-specific segregation of functional territories based on deep phenotyping. Human Brain Mapping, 2021, 42, 841-870.	3.6	11
81	Benchmarking missing-values approaches for predictive models on health databases. GigaScience, 2022, 11, .	6.4	11
82	Cohort-Level Brain Mapping: Learning Cognitive Atoms to Single Out Specialized Regions. Lecture Notes in Computer Science, 2013, 23, 438-449.	1.3	10
83	A Comparison of Metrics and Algorithms for Fiber Clustering. , 2013, , .		9
84	Loading and plotting of cortical surface representations in Nilearn. Research Ideas and Outcomes, 0, 3, .	1.0	9
85	Changing computational research. The challenges ahead. Source Code for Biology and Medicine, 2012, 7, 2.	1.7	8
86	Grouping Total Variation and Sparsity: Statistical Learning with Segmenting Penalties. Lecture Notes in Computer Science, 2015, , 685-693.	1.3	8
87	Neuroimaging Research: From Null-Hypothesis Falsification to Out-of-Sample Generalization. Educational and Psychological Measurement, 2017, 77, 868-880.	2.4	8
88	Hierarchical Region-Network Sparsity for High-Dimensional Inference in Brain Imaging. Lecture Notes in Computer Science, 2017, 10265, 323-335.	1.3	8
89	ICA-based sparse features recovery from fMRI datasets. , 2010, , .		7
90	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

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91	Predicting future cognitive decline from non-brain and multimodal brain imaging data in healthy and pathological aging. <i>Neurobiology of Aging</i> , 2022, 118, 55-65.	3.1	7
92	Decoding Visual Percepts Induced by Word Reading with fMRI. , 2012, , .		6
93	Connectivity-informed Sparse Classifiers for fMRI Brain Decoding. , 2012, , .		6
94	Improving Accuracy and Power with Transfer Learning Using a Meta-analytic Database. <i>Lecture Notes in Computer Science</i> , 2012, 15, 248-255.	1.3	6
95	Multifractal analysis of Resting State Networks in functional MRI. , 2011, , .		5
96	Improving Sparse Recovery on Structured Images with Bagged Clustering. , 2015, , .		5
97	Integrating Multimodal Priors in Predictive Models for the Functional Characterization of Alzheimer's Disease. <i>Lecture Notes in Computer Science</i> , 2015, , 207-214.	1.3	5
98	Agile Computer Control of a Complex Experiment. <i>Computing in Science and Engineering</i> , 2008, 10, 55-59.	1.2	4
99	Title is missing!. <i>Physics-Uspexhi</i> , 2008, 51, 205.	2.2	4
100	Hemodynamic Estimation Based on Consensus Clustering. , 2013, , .		4
101	Speeding-Up Model-Selection in Graphnet via Early-Stopping and Univariate Feature-Screening. , 2015, , .		4
102	Multi-output predictions from neuroimaging: assessing reduced-rank linear models. , 2017, , .		4
103	Deriving a Multi-subject Functional-Connectivity Atlas to Inform Connectome Estimation. <i>Lecture Notes in Computer Science</i> , 2014, 17, 185-192.	1.3	4
104	Enhancing the Reproducibility of Group Analysis with Randomized Brain Parcellations. <i>Lecture Notes in Computer Science</i> , 2013, 16, 591-598.	1.3	4
105	Relating Brain Functional Connectivity to Anatomical Connections: Model Selection. <i>Lecture Notes in Computer Science</i> , 2012, , 178-185.	1.3	4
106	Numerical uncertainty in analytical pipelines lead to impactful variability in brain networks. <i>PLoS ONE</i> , 2021, 16, e0250755.	2.5	4
107	Total Variation Regularization Enhances Regression-Based Brain Activity Prediction. , 2010, , .		3
108	Beyond Brain Reading: Randomized Sparsity and Clustering to Simultaneously Predict and Identify. <i>Lecture Notes in Computer Science</i> , 2012, , 9-16.	1.3	3

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109	Improved Brain Pattern Recovery through Ranking Approaches. , 2012, , .		3
110	Convex relaxations of penalties for sparse correlated variables with bounded total variation. Machine Learning, 2015, 100, 533-553.	5.4	3
111	Accurate Definition of Brain Regions Position through the Functional Landmark Approach. Lecture Notes in Computer Science, 2010, 13, 241-248.	1.3	3
112	Principal Component Regression Predicts Functional Responses across Individuals. Lecture Notes in Computer Science, 2014, 17, 741-748.	1.3	3
113	Comprehensive decoding mental processes from Web repositories of functional brain images. Scientific Reports, 2022, 12, 7050.	3.3	3
114	Decoding with confidence: Statistical control on decoder maps. NeuroImage, 2021, 234, 117921.	4.2	2
115	A Comparative Study of Algorithms for Intra- and Inter-subjects fMRI Decoding. Lecture Notes in Computer Science, 2012, , 1-8.	1.3	2
116	Analytics on Non-Normalized Data Sources: More Learning, Rather Than More Cleaning. IEEE Access, 2022, 10, 42420-42431.	4.2	2
117	Towards a faster randomized parcellation based inference. , 2017, , .		1
118	Non-parametric Density Modeling and Outlier-Detection in Medical Imaging Datasets. Lecture Notes in Computer Science, 2012, , 210-217.	1.3	1
119	Statistical Learning for Resting-State fMRI: Successes and Challenges. Lecture Notes in Computer Science, 2012, , 172-177.	1.3	1
120	Population-Shrinkage of Covariance to Estimate Better Brain Functional Connectivity. Lecture Notes in Computer Science, 2017, , 460-468.	1.3	1
121	Youthful spirit. Nature Physics, 2007, 3, 287-287.	16.7	0
122	On Spatial Selectivity and Prediction across Conditions with fMRI. , 2012, , .		0
123	Robust Group-Level Inference in Neuroimaging Genetic Studies. , 2013, , .		0
124	Understanding Brain Network Dynamics in Autism Begs for Generalization. Biological Psychiatry, 2022, 91, 916-917.	1.3	0