Saad Jbabdi

List of Publications by Year in descending order

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10351 9073 31,610 156 72 144 citations h-index g-index papers 194 194 194 25398 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	The minimal preprocessing pipelines for the Human Connectome Project. Neurolmage, 2013, 80, 105-124.	2.1	4,042
2	Probabilistic diffusion tractography with multiple fibre orientations: What can we gain?. Neurolmage, 2007, 34, 144-155.	2.1	3,129
3	Bayesian analysis of neuroimaging data in FSL. Neurolmage, 2009, 45, S173-S186.	2.1	2,074
4	Multimodal population brain imaging in the UK Biobank prospective epidemiological study. Nature Neuroscience, 2016, 19, 1523-1536.	7.1	1,414
5	Image processing and Quality Control for the first 10,000 brain imaging datasets from UK Biobank. Neurolmage, 2018, 166, 400-424.	2.1	1,026
6	Advances in diffusion MRI acquisition and processing in the Human Connectome Project. Neurolmage, 2013, 80, 125-143.	2.1	851
7	SARS-CoV-2 is associated with changes in brain structure in UK Biobank. Nature, 2022, 604, 697-707.	13.7	825
8	Pushing spatial and temporal resolution for functional and diffusion MRI in the Human Connectome Project. Neurolmage, 2013, 80, 80-104.	2.1	769
9	Task-free MRI predicts individual differences in brain activity during task performance. Science, 2016, 352, 216-220.	6.0	648
10	Tractography: Where Do We Go from Here?. Brain Connectivity, 2011, 1, 169-183.	0.8	542
11	MSM: A new flexible framework for Multimodal Surface Matching. Neurolmage, 2014, 100, 414-426.	2.1	532
12	Automated probabilistic reconstruction of white-matter pathways in health and disease using an atlas of the underlying anatomy. Frontiers in Neuroinformatics, 2011, 5, 23.	1.3	488
13	DTI measures in crossing-fibre areas: Increased diffusion anisotropy reveals early white matter alteration in MCI and mild Alzheimer's disease. NeuroImage, 2011, 55, 880-890.	2.1	468
14	Connectivity-Based Subdivisions of the Human Right "Temporoparietal Junction Area": Evidence for Different Areas Participating in Different Cortical Networks. Cerebral Cortex, 2012, 22, 1894-1903.	1.6	452
15	Diffusion-Weighted Imaging Tractography-Based Parcellation of the Human Parietal Cortex and Comparison with Human and Macaque Resting-State Functional Connectivity. Journal of Neuroscience, 2011, 31, 4087-4100.	1.7	446
16	Social Network Size Affects Neural Circuits in Macaques. Science, 2011, 334, 697-700.	6.0	435
17	Imaging human connectomes at the macroscale. Nature Methods, 2013, 10, 524-539.	9.0	384
18	Motor Skill Learning Induces Changes in White Matter Microstructure and Myelination. Journal of Neuroscience, 2013, 33, 19499-19503.	1.7	369

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19	The Organization of Dorsal Frontal Cortex in Humans and Macaques. Journal of Neuroscience, 2013, 33, 12255-12274.	1.7	366
20	Modelâ€based analysis of multishell diffusion MR data for tractography: How to get over fitting problems. Magnetic Resonance in Medicine, 2012, 68, 1846-1855.	1.9	336
21	Anatomical and Functional Connectivity of Cytoarchitectonic Areas within the Human Parietal Operculum. Journal of Neuroscience, 2010, 30, 6409-6421.	1.7	324
22	Using Diffusion Tractography to Predict Cortical Connection Strength and Distance: A Quantitative Comparison with Tracers in the Monkey. Journal of Neuroscience, 2016, 36, 6758-6770.	1.7	318
23	Diffusion-Weighted Imaging Tractography-Based Parcellation of the Human Lateral Premotor Cortex Identifies Dorsal and Ventral Subregions with Anatomical and Functional Specializations. Journal of Neuroscience, 2007, 27, 10259-10269.	1.7	303
24	Measuring macroscopic brain connections in vivo. Nature Neuroscience, 2015, 18, 1546-1555.	7.1	292
25	Extending the Human Connectome Project across ages: Imaging protocols for the Lifespan Development and Aging projects. Neurolmage, 2018, 183, 972-984.	2.1	290
26	Connectivity-Based Functional Analysis of Dopamine Release in the Striatum Using Diffusion-Weighted MRI and Positron Emission Tomography. Cerebral Cortex, 2014, 24, 1165-1177.	1.6	276
27	Probabilistic tractography recovers a rostrocaudal trajectory of connectivity variability in the human insular cortex. Human Brain Mapping, 2012, 33, 2005-2034.	1.9	255
28	Simulation of anisotropic growth of low-grade gliomas using diffusion tensor imaging. Magnetic Resonance in Medicine, 2005, 54, 616-624.	1.9	247
29	A Bayesian framework for global tractography. NeuroImage, 2007, 37, 116-129.	2.1	243
30	Diffusion imaging of whole, post-mortem human brains on a clinical MRI scanner. NeuroImage, 2011, 57, 167-181.	2.1	239
31	Heritability of fractional anisotropy in human white matter: A comparison of Human Connectome Project and ENIGMA-DTI data. NeuroImage, 2015, 111, 300-311.	2.1	227
32	Changes in connectivity after visual cortical brain damage underlie altered visual function. Brain, 2008, 131, 1433-1444.	3.7	226
33	Network analysis detects changes in the contralesional hemisphere following stroke. NeuroImage, 2011, 54, 161-169.	2.1	204
34	Spatially constrained hierarchical parcellation of the brain with resting-state fMRI. NeuroImage, 2013, 76, 313-324.	2.1	203
35	Cortical and Subcortical Connectivity Changes during Decreasing Levels of Consciousness in Humans: A Functional Magnetic Resonance Imaging Study using Propofol. Journal of Neuroscience, 2010, 30, 9095-9102.	1.7	199
36	Subthalamic deep brain stimulation sweet spots and hyperdirect cortical connectivity in Parkinson's disease. NeuroImage, 2017, 158, 332-345.	2.1	197

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37	Automated quality control for within and between studies diffusion MRI data using a non-parametric framework for movement and distortion correction. Neurolmage, 2019, 184, 801-812.	2.1	197
38	Causal effect of disconnection lesions on interhemispheric functional connectivity in rhesus monkeys. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13982-13987.	3.3	195
39	Symmetrical event-related EEG/fMRI information fusion in a variational Bayesian framework. Neurolmage, 2007, 36, 69-87.	2.1	189
40	In vivo evidence for the selective subcortical degeneration in Huntington's disease. NeuroImage, 2009, 46, 958-966.	2.1	185
41	Human and Monkey Ventral Prefrontal Fibers Use the Same Organizational Principles to Reach Their Targets: Tracing versus Tractography. Journal of Neuroscience, 2013, 33, 3190-3201.	1.7	185
42	Crossing fibres in tract-based spatial statistics. NeuroImage, 2010, 49, 249-256.	2.1	174
43	Effects of image reconstruction on fiber orientation mapping from multichannel diffusion MRI: Reducing the noise floor using SENSE. Magnetic Resonance in Medicine, 2013, 70, 1682-1689.	1.9	169
44	High resolution diffusion-weighted imaging in fixed human brain using diffusion-weighted steady state free precession. Neurolmage, 2009, 46, 775-785.	2.1	166
45	High resolution whole brain diffusion imaging at 7 T for the Human Connectome Project. Neurolmage, 2015, 122, 318-331.	2.1	166
46	XTRACT - Standardised protocols for automated tractography in the human and macaque brain. NeuroImage, 2020, 217, 116923.	2.1	165
47	MRI characteristics of the substantia nigra in Parkinson's disease: A combined quantitative T1 and DTI study. NeuroImage, 2009, 47, 435-441.	2.1	163
48	Slow-Wave Activity Saturation and Thalamocortical Isolation During Propofol Anesthesia in Humans. Science Translational Medicine, 2013, 5, 208ra148.	5.8	162
49	Accelerating Fibre Orientation Estimation from Diffusion Weighted Magnetic Resonance Imaging Using GPUs. PLoS ONE, 2013, 8, e61892.	1.1	152
50	Differential structural and resting state connectivity between insular subdivisions and other pain-related brain regions. Pain, 2014, 155, 2047-2055.	2.0	144
51	Determination of the human brainstem respiratory control network and its cortical connections in vivo using functional and structural imaging. NeuroImage, 2009, 44, 295-305.	2.1	143
52	Ball and rackets: Inferring fiber fanning from diffusion-weighted MRI. NeuroImage, 2012, 60, 1412-1425.	2.1	142
53	Evaluating fibre orientation dispersion in white matter: Comparison of diffusion MRI, histology and polarized light imaging. NeuroImage, 2017, 157, 561-574.	2.1	141
54	Identification of large-scale networks in the brain using fMRI. NeuroImage, 2006, 29, 1231-1243.	2.1	140

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55	Structural and functional bases for individual differences in motor learning. Human Brain Mapping, 2011, 32, 494-508.	1.9	136
56	Continuity, Divergence, and the Evolution of Brain Language Pathways. Frontiers in Evolutionary Neuroscience, 2011, 3, 11.	3.7	136
57	Whole brain comparative anatomy using connectivity blueprints. ELife, 2018, 7, .	2.8	135
58	Connectivity Fingerprints: From Areal Descriptions to Abstract Spaces. Trends in Cognitive Sciences, 2018, 22, 1026-1037.	4.0	134
59	fMRI and sleep correlates of the ageâ€related impairment in motor memory consolidation. Human Brain Mapping, 2014, 35, 3625-3645.	1.9	127
60	Automated processing pipeline for neonatal diffusion MRI in the developing Human Connectome Project. Neurolmage, 2019, 185, 750-763.	2.1	127
61	Connectivity-based segmentation of the substantia nigra in human and its implications in Parkinson's disease. Neurolmage, 2010, 52, 1175-1180.	2.1	124
62	The CONNECT project: Combining macro- and micro-structure. Neurolmage, 2013, 80, 273-282.	2.1	121
63	Functional Segmentation of the Anterior Limb of the Internal Capsule: Linking White Matter Abnormalities to Specific Connections. Journal of Neuroscience, 2018, 38, 2106-2117.	1.7	118
64	Unmasking Latent Inhibitory Connections in Human Cortex to Reveal Dormant Cortical Memories. Neuron, 2016, 90, 191-203.	3.8	112
65	Using GPUs to accelerate computational diffusion MRI: From microstructure estimation to tractography and connectomes. Neurolmage, 2019, 188, 598-615.	2.1	107
66	Revealing the neural fingerprints of a missing hand. ELife, 2016, 5, .	2.8	107
67	Investigating the Stability of Fine-Grain Digit Somatotopy in Individual Human Participants. Journal of Neuroscience, 2016, 36, 1113-1127.	1.7	102
68	Structural Correlates of Preterm Birth in the Adolescent Brain. Pediatrics, 2009, 124, e964-e972.	1.0	100
69	The topographic connectome. Current Opinion in Neurobiology, 2013, 23, 207-215.	2.0	99
70	Challenges and future directions for representations of functional brain organization. Nature Neuroscience, 2020, 23, 1484-1495.	7.1	99
71	Preoperative estimation of residual volume for WHO grade II glioma resected with intraoperative functional mapping. Neuro-Oncology, 2007, 9, 63-69.	0.6	92
72	Accurate Anisotropic Fast Marching for Diffusion-Based Geodesic Tractography. International Journal of Biomedical Imaging, 2008, 2008, 1-12.	3.0	91

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73	Fusion in diffusion MRI for improved fibre orientation estimation: An application to the 3T and 7T data of the Human Connectome Project. Neurolmage, 2016, 134, 396-409.	2.1	91
74	The extreme capsule fiber complex in humans and macaque monkeys: a comparative diffusion MRI tractography study. Brain Structure and Function, 2016, 221, 4059-4071.	1.2	91
75	What is special about the human arcuate fasciculus? Lateralization, projections, and expansion. Cortex, 2019, 118, 107-115.	1.1	88
76	Multiple-subjects connectivity-based parcellation using hierarchical Dirichlet process mixture models. NeuroImage, 2009, 44, 373-384.	2.1	85
77	Comprehensive morphometry of subcortical grey matter structures in earlyâ€stage Parkinson's disease. Human Brain Mapping, 2014, 35, 1681-1690.	1.9	84
78	A connectional hub in the rostral anterior cingulate cortex links areas of emotion and cognitive control. ELife, $2019,8,.$	2.8	78
79	A probabilistic atlas of the cerebellar white matter. NeuroImage, 2016, 124, 724-732.	2.1	74
80	A biophysical model of dynamic balancing of excitation and inhibition in fast oscillatory large-scale networks. PLoS Computational Biology, 2018, 14, e1006007.	1.5	73
81	Timeâ€efficient and flexible design of optimized multishell HARDI diffusion. Magnetic Resonance in Medicine, 2018, 79, 1276-1292.	1.9	72
82	Connectivityâ€based segmentation of the periaqueductal gray matter in human with brainstem optimized diffusion MRI. Human Brain Mapping, 2015, 36, 3459-3471.	1.9	71
83	Cross-species cortical alignment identifies different types of anatomical reorganization in the primate temporal lobe. ELife, 2020, 9, .	2.8	71
84	Diffusion tractography of post-mortem human brains: Optimization and comparison of spin echo and steady-state free precession techniques. Neurolmage, 2012, 59, 2284-2297.	2.1	70
85	Preservation of motor skill learning in patients with multiple sclerosis. Multiple Sclerosis Journal, 2011, 17, 103-115.	1.4	69
86	Towards HCP-Style macaque connectomes: 24-Channel 3T multi-array coil, MRI sequences and preprocessing. Neurolmage, 2020, 215, 116800.	2.1	67
87	How can a Bayesian approach inform neuroscience?. European Journal of Neuroscience, 2012, 35, 1169-1179.	1.2	66
88	Four Deep Brain Stimulation Targets for Obsessive-Compulsive Disorder: Are They Different?. Biological Psychiatry, 2021, 90, 667-677.	0.7	65
89	Relating Brain Damage to Brain Plasticity in Patients With Multiple Sclerosis. Neurorehabilitation and Neural Repair, 2012, 26, 581-593.	1.4	61
90	Investigation of Slow-wave Activity Saturation during Surgical Anesthesia Reveals a Signature of Neural Inertia in Humans. Anesthesiology, 2017, 127, 645-657.	1.3	60

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91	The spatial correspondence and genetic influence of interhemispheric connectivity with white matter microstructure. Nature Neuroscience, 2019, 22, 809-819.	7.1	56
92	Resting connectivity predicts task activation in pre-surgical populations. NeuroImage: Clinical, 2017, 13, 378-385.	1.4	55
93	Mapping Connections in Humans andÂNon-Human Primates. , 2014, , 337-358.		53
94	Motor Practice Promotes Increased Activity in Brain Regions Structurally Disconnected After Subcortical Stroke. Neurorehabilitation and Neural Repair, 2011, 25, 607-616.	1.4	52
95	Circuits, Networks, and Neuropsychiatric Disease: Transitioning From Anatomy to Imaging. Biological Psychiatry, 2020, 87, 318-327.	0.7	51
96	Longitudinal connections and the organization of the temporal cortex in macaques, great apes, and humans. PLoS Biology, 2020, 18, e3000810.	2.6	49
97	FSLâ€MRS: An endâ€ŧoâ€end spectroscopy analysis package. Magnetic Resonance in Medicine, 2021, 85, 2950-2964.	1.9	49
98	A Common Space Approach to Comparative Neuroscience. Annual Review of Neuroscience, 2021, 44, 69-86.	5.0	48
99	Dissecting the pathobiology of altered MRI signal in amyotrophic lateral sclerosis: A post mortem whole brain sampling strategy for the integration of ultra-high-field MRI and quantitative neuropathology. BMC Neuroscience, 2018, 19, 11.	0.8	47
100	Dentatorubrothalamic tract localization with postmortem MR diffusion tractography compared to histological 3D reconstruction. Brain Structure and Function, 2016, 221, 3487-3501.	1.2	43
101	Improving diffusion-weighted imaging of post-mortem human brains: SSFP at 7T. NeuroImage, 2014, 102, 579-589.	2.1	42
102	The Developing Human Connectome Project Neonatal Data Release. Frontiers in Neuroscience, 2022, 16,	1.4	42
103	Pathology of callosal damage in ALS: An ex-vivo, 7 T diffusion tensor MRI study. NeuroImage: Clinical, 2017, 15, 200-208.	1.4	40
104	Perceptually relevant remapping of human somatotopy in 24 hours. ELife, 2016, 5, .	2.8	40
105	Improved tractography using asymmetric fibre orientation distributions. NeuroImage, 2017, 158, 205-218.	2.1	39
106	Connectivity and the search for specializations in the language-capable brain. Current Opinion in Behavioral Sciences, 2018, 21, 19-26.	2.0	37
107	Concurrent white matter bundles and grey matter networks using independent component analysis. Neurolmage, 2018, 170, 296-306.	2.1	37
108	Diffusion tensor imaging of dolphin brains reveals direct auditory pathway to temporal lobe. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20151203.	1.2	36

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109	Longâ€range connectomics. Annals of the New York Academy of Sciences, 2013, 1305, 83-93.	1.8	35
110	Brain Systems for Probabilistic and Dynamic Prediction: Computational Specificity and Integration. PLoS Biology, 2013, 11, e1001662.	2.6	35
111	RubiX: Combining Spatial Resolutions for Bayesian Inference of Crossing Fibers in Diffusion MRI. IEEE Transactions on Medical Imaging, 2013, 32, 969-982.	5.4	32
112	Multimodal Surface Matching: Fast and Generalisable Cortical Registration Using Discrete Optimisation. Lecture Notes in Computer Science, 2013, 23, 475-486.	1.0	32
113	Anesthesia-induced Suppression of Human Dorsal Anterior Insula Responsivity at Loss of Volitional Behavioral Response. Anesthesiology, 2016, 124, 766-778.	1.3	31
114	Structural Variability in the Human Brain Reflects Fine-Grained Functional Architecture at the Population Level. Journal of Neuroscience, 2019, 39, 6136-6149.	1.7	29
115	Thalamo-Cortical Disruption Contributes to Short-Term Memory Deficits in Patients with Medial Temporal Lobe Damage. Cerebral Cortex, 2015, 25, 4584-4595.	1.6	25
116	MR Diffusion Tractography. , 2009, , 333-351.		23
117	Estimation of Liâ€lon Degradation Test Sample Sizes Required to Understand Cellâ€toâ€Cell Variability**. Batteries and Supercaps, 2021, 4, 1821-1829.	2.4	23
118	Tractography Study of Deep Brain Stimulation of the Anterior Cingulate Cortex inÂChronic Pain: Key to Improve the Targeting. World Neurosurgery, 2016, 86, 361-370.e3.	0.7	22
119	The Digital Brain Bank, an open access platform for post-mortem imaging datasets. ELife, 2022, 11, .	2.8	22
120	Concurrent analysis of white matter bundles and grey matter networks in the chimpanzee. Brain Structure and Function, 2019, 224, 1021-1033.	1.2	21
121	Clinical applications of magnetic resonance imaging based functional and structural connectivity. Neurolmage, 2021, 244, 118649.	2.1	21
122	An empirical, 21st century evaluation of phrenology. Cortex, 2018, 106, 26-35.	1.1	20
123	Joint modelling of diffusion MRI and microscopy. Neurolmage, 2019, 201, 116014.	2.1	19
124	Improved fibre dispersion estimation using b-tensor encoding. NeuroImage, 2020, 215, 116832.	2.1	17
125	Bayesian Optimisation of Large-Scale Biophysical Networks. Neurolmage, 2018, 174, 219-236.	2.1	16
126	A model for extraâ€axonal diffusion spectra with frequencyâ€dependent restriction. Magnetic Resonance in Medicine, 2015, 73, 2306-2320.	1.9	15

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127	Modelling white matter in gyral blades as a continuous vector field. Neurolmage, 2021, 227, 117693.	2.1	15
128	The Temporoparietal Fiber Intersection Area and Wernicke Perpendicular Fasciculus. Neurosurgery, 2013, 73, E381-E382.	0.6	14
129	MR Diffusion Tractography. , 2014, , 429-451.		14
130	Non-negative data-driven mapping of structural connections with application to the neonatal brain. Neurolmage, 2020, 222, 117273.	2.1	14
131	Transient spectral events in resting state MEG predict individual task responses. NeuroImage, 2020, 215, 116818.	2.1	14
132	Human decisions about when to act originate within a basal forebrain–nigral circuit. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11799-11810.	3.3	14
133	A gyral coordinate system predictive of fibre orientations. Neurolmage, 2018, 176, 417-430.	2.1	13
134	A Brain Network Processing the Age of Faces. PLoS ONE, 2012, 7, e49451.	1.1	13
135	Specialization: the connections have it. Nature Neuroscience, 2012, 15, 171-172.	7.1	12
136	Feasibility of Diffusion Tensor and Morphologic Imaging of Peripheral Nerves at Ultra-High Field Strength. Investigative Radiology, 2018, 53, 705-713.	3.5	11
137	Modeling an equivalent bâ€value in diffusionâ€weighted steadyâ€state free precession. Magnetic Resonance in Medicine, 2020, 84, 873-884.	1.9	11
138	Functional and diffusion MRI reveal the neurophysiological basis of neonates' noxious-stimulus evoked brain activity. Nature Communications, 2021, 12, 2744.	5.8	11
139	Hierarchical modelling of functional brain networks in population and individuals from big fMRI data. Neurolmage, 2021, 243, 118513.	2.1	8
140	Use of multi-flip angle measurements to account for transmit inhomogeneity and non-Gaussian diffusion in DW-SSFP. NeuroImage, 2020, 220, 117113.	2.1	7
141	Neuroimage special issue on brain segmentation and parcellation - Editorial. NeuroImage, 2018, 170, 1-4.	2.1	5
142	Imaging Structure and Function., 2009,, 461-480.		3
143	Cross-Subject Comparison of Local Diffusion MRI Parameters. , 2014, , 209-239.		3
144	Imaging Structure and Function. , 2014, , 585-605.		3

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145	Choice of reference measurements affects quantification of long diffusion time behaviour using stimulated echoes. Magnetic Resonance in Medicine, 2018, 79, 952-959.	1.9	3
146	Accurate predictions of individual differences in task-evoked brain activity from resting-state fMRI using a sparse ensemble learner. NeuroImage, 2022, 259, 119418.	2.1	3
147	Tract-Based Spatial Statistics and Other Approaches for Cross-Subject Comparison of Local Diffusion MRI Parameters. , 2015, , 437-464.		2
148	Quantifying myelin in crossing fibers using diffusionâ€prepared phase imaging: Theory and simulations. Magnetic Resonance in Medicine, 2021, 86, 2618-2634.	1.9	2
149	Identifying microstructural changes in diffusion MRI; How to circumvent parameter degeneracy. Neurolmage, 2022, 260, 119452.	2.1	1
150	219 A CLINICAL AND IMAGING PROTOCOL FOR THE DETAILED EVALUATION OF CHRONIC NEUROPATHIC PAIN IN MULTIPLE SCLEROSIS. European Journal of Pain, 2009, 13, S71a.	1.4	0
151	486 CHRONIC NEUROPATHIC PAIN IN MULTIPLE SCLEROSIS: CLINICAL AND IMAGING FINDINGS, WITH A SPECIAL FOCUS ON THE THALAMUS. European Journal of Pain, 2009, 13, S144b.	1.4	0
152	Bayesian estimation of dynamic systems function expansions. , 2010, , .		0
153	Modelling fibre fanning in diffusion-weighted MRI. , 2012, , .		0
154	A Machine Learning Approach toÂDiffusion MRI Partial Volume Estimation. Lecture Notes in Computer Science, 2018, , 42-51.	1.0	0
155	Auditory and pain processing is severely disrupted at slow wave activity saturation under general anaesthesia. British Journal of Anaesthesia, 2019, 123, e514.	1.5	0
156	Integration of Measures of Functional and Structural MRI. Neuromethods, 2009, , 785-809.	0.2	0