Alessandro Daducci

List of Publications by Year
in descending order

95 papers	5,458 citations	186265 28 h-index	106344 65 g-index
108 all docs	108 docs citations	108 times ranked	7234 citing authors

#	Article	IF	Citations
1	Image processing and Quality Control for the first 10,000 brain imaging datasets from UK Biobank. NeuroImage, 2018, 166, 400-424.	4.2	1,026
2	The challenge of mapping the human connectome based on diffusion tractography. Nature Communications, 2017, 8, 1349.	12.8	956
3	Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data. NeuroImage, 2015, 105, 32-44.	4.2	377
4	The Connectome Mapper: An Open-Source Processing Pipeline to Map Connectomes with MRI. PLoS ONE, 2012, 7, e48121.	2.5	248
5	An evaluation of volume-based morphometry for prediction of mild cognitive impairment and Alzheimer's disease. NeuroImage: Clinical, 2015, 7, 7-17.	2.7	217
6	Limits to anatomical accuracy of diffusion tractography using modern approaches. NeuroImage, 2019, 185, 1-11.	4.2	200
7	COMMIT: Convex Optimization Modeling for Microstructure Informed Tractography. IEEE Transactions on Medical Imaging, 2015, 34, 246-257.	8.9	188
8	Quantitative Comparison of Reconstruction Methods for Intra-Voxel Fiber Recovery From Diffusion MRI. IEEE Transactions on Medical Imaging, 2014, 33, 384-399.	8.9	145
9	Challenges in diffusion MRI tractography â€“ Lessons learned from international benchmark competitions. Magnetic Resonance Imaging, 2019, 57, 194-209.	1.8	99
10	Microstructure Informed Tractography: Pitfalls and Open Challenges. Frontiers in Neuroscience, 2016, 10, 247.	2.8	96
11	The Connectome Viewer Toolkit: An Open Source Framework to Manage, Analyze, and Visualize Connectomes. Frontiers in Neuroinformatics, 2011, 5, 3.	2.5	95
12	Quantitative mapping of the brainâ€™s structural connectivity using diffusion MRI tractography: A review. NeuroImage, 2022, 249, 118870.	4.2	95
13	Tractography dissection variability: What happens when 42 groups dissect 14 white matter bundles on the same dataset?. NeuroImage, 2021, 243, 118502.	4.2	94
14	Structural abnormalities in the thalamus of migraineurs with aura: A multiparametric study at 3 T. Human Brain Mapping, 2014, 35, 1461-1468.	3.6	72
15	Surface-enhanced tractography (SET). NeuroImage, 2018, 169, 524-539.	4.2	69
16	Transient networks of spatio-temporal connectivity map communication pathways in brain functional systems. NeuroImage, 2017, 155, 490-502.	4.2	65
17	A new method for accurate in vivo mapping of human brain connections using microstructural and anatomical information. Science Advances, 2020, 6, eaba8245.	10.3	64
18	Myelin and axon pathology in multiple sclerosis assessed by myelin water and multi-shell diffusion imaging. Brain, 2021, 144, 1684-1696.	7.6	61

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19	Connectivity and tissue microstructural alterations in right and left temporal lobe epilepsy revealed by diffusion spectrum imaging. NeuroImage: Clinical, 2014, 5, 349-358.	2.7	59
20	Tractostorm: The what, why, and how of tractography dissection reproducibility. Human Brain Mapping, 2020, 41, 1859-1874.	3.6	59
21	Robust thalamic nuclei segmentation method based on local diffusion magnetic resonance properties. Brain Structure and Function, 2017, 222, 2203-2216.	2.3	58
22	A new early and automated MRI-based predictor of motor improvement after stroke. Neurology, 2012, 79, 39-46.	1.1	49
23	Sparse regularization for fiber ODF reconstruction: From the suboptimality of and priors to. Medical Image Analysis, 2014, 18, 820-833.	11.6	49
24	Ax<scp>T</scp>ract: Toward microstructure informed tractography. Human Brain Mapping, 2017, 38, 5485-5500.	3.6	47
25	Synthesis and characterization of polyethylenimine-based iron oxide composites as novel contrast agents for MRI. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2009, 22, 77-87.	2.0	46
26	Tractography reproducibility challenge with empirical data (TraCED): The 2017 ISMRM diffusion study group challenge. Journal of Magnetic Resonance Imaging, 2020, 51, 234-249.	3.4	38
27	Global Tractography with Embedded Anatomical Priors for Quantitative Connectivity Analysis. Frontiers in Neurology, 2014, 5, 232.	2.4	34
28	Multicontrast connectometry: A new tool to assess cerebellum alterations in early relapsingâ€remitting multiple sclerosis. Human Brain Mapping, 2015, 36, 1609-1619.	3.6	30
29	Experimental protocol for activationâ€induced manganeseâ€enhanced MRI (AIMâ€MRI) based on quantitative determination of Mn content in rat brain by fast T₁ mapping. Magnetic Resonance in Medicine, 2009, 62, 1080-1084.	3.0	29
30	What lies beneath? Diffusion EAP-based study of brain tissue microstructure. Medical Image Analysis, 2016, 32, 145-156.	11.6	29
31	Sparse wars: A survey and comparative study of spherical deconvolution algorithms for diffusion MRI. NeuroImage, 2019, 184, 140-160.	4.2	29
32	Resolving bundle-specific intra-axonal T2 values within a voxel using diffusion-relaxation tract-based estimation. NeuroImage, 2021, 227, 117617.	4.2	28
33	A New Advanced <scp>MRI</scp> Biomarker for Remyelinated Lesions in Multiple Sclerosis. Annals of Neurology, 2022, 92, 486-502.	5.3	28
34	Spherical Deconvolution of Multichannel Diffusion MRI Data with Non-Gaussian Noise Models and Spatial Regularization. PLoS ONE, 2015, 10, e0138910.	2.5	27
35	Structured sparsity for spatially coherent fibre orientation estimation in diffusion MRI. NeuroImage, 2015, 115, 245-255.	4.2	26
36	Quantitative Analysis of Myelin and Axonal Remodeling in the Uninjured Motor Network After Stroke. Brain Connectivity, 2015, 5, 401-412.	1.7	26

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37	Sensoryâ€motor network topology in multiple sclerosis: Structural connectivity analysis accounting for intrinsic density discrepancy. Human Brain Mapping, 2020, 41, 2951-2963.	3.6	26
38	Migraineurs Without Aura Show Microstructural Abnormalities in the Cerebellum and Frontal Lobe. Cerebellum, 2013, 12, 812-818.	2.5	23
39	DCE-MRI using small-molecular and albumin-binding contrast agents in experimental carcinomas with different stromal content. European Journal of Radiology, 2011, 78, 52-59.	2.6	21
40	A multi-center study: Intra-scan and inter-scan variability of diffusion spectrum imaging. NeuroImage, 2012, 62, 87-94.	4.2	21
41	A Connectome-Based Comparison of Diffusion MRI Schemes. PLoS ONE, 2013, 8, e75061.	2.5	21
42	Higher Order Spherical Harmonics Reconstruction of Fetal Diffusion MRI With Intensity Correction. IEEE Transactions on Medical Imaging, 2020, 39, 1104-1113.	8.9	20
43	Comparison of diffusion MRI and CLARITY fiber orientation estimates in both gray and white matter regions of human and primate brain. NeuroImage, 2021, 228, 117692.	4.2	20
44	Micro-Structural Brain Alterations in Aviremic HIV+ Patients with Minor Neurocognitive Disorders: A Multi-Contrast Study at High Field. PLoS ONE, 2013, 8, e72547.	2.5	19
45	A multi-contrast MRI study of microstructural brain damage in patients with mild cognitive impairment. NeuroImage: Clinical, 2015, 8, 631-639.	2.7	19
46	VERDICTâ€AMICO: Ultrafast fitting algorithm for nonâ€invasive prostate microstructure characterization. NMR in Biomedicine, 2019, 32, e4019.	2.8	19
47	A convex optimization framework for global tractography. , 2013, , .		17
48	Central nervous system microbleeds in the acute phase are associated with structural integrity by DTI one year after mild traumatic brain injury: A longitudinal study. Neurologia I Neurochirurgia Polska, 2018, 52, 710-719.	1.2	17
49	Advances in computational and statistical diffusion MRI. NMR in Biomedicine, 2019, 32, e3805.	2.8	17
50	Insights from the IronTract challenge: Optimal methods for mapping brain pathways from multi-shell diffusion MRI. NeuroImage, 2022, 257, 119327.	4.2	17
51	Fast and highâ€resolution myelin water imaging: Accelerating multiâ€echo GRASE with CAIPIRINHA. Magnetic Resonance in Medicine, 2021, 85, 209-222.	3.0	16
52	Comparison of non-parametric T2 relaxometry methods for myelin water quantification. Medical Image Analysis, 2021, 69, 101959.	11.6	16
53	Bundle myelin fraction (BMF) mapping of different white matter connections using microstructure informed tractography. NeuroImage, 2022, 249, 118922.	4.2	15
54	Diagnostic approaches to predict persistent post-traumatic symptoms after mild traumatic brain injury â€“ a literature review. International Journal of Neuroscience, 2016, 126, 289-298.	1.6	13

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55	Hierarchical Microstructure Informed Tractography. Brain Connectivity, 2021, 11, 75-88.	1.7	13
56	Surface-driven registration method for the structure-informed segmentation of diffusion MR images. NeuroImage, 2016, 139, 450-461.	4.2	12
57	Bundle-Specific Axon Diameter Index as a New Contrast to Differentiate White Matter Tracts. Frontiers in Neuroscience, 2021, 15, 646034.	2.8	11
58	Manganese-enhanced magnetic resonance imaging investigation of the interferon-Î± model of depression in rats. Magnetic Resonance Imaging, 2014, 32, 529-534.	1.8	10
59	DCE-MRI Data Analysis for Cancer Area Classification. Methods of Information in Medicine, 2009, 48, 248-253.	1.2	9
60	Simulation-based evaluation of susceptibility distortion correction methods in diffusion MRI for connectivity analysis. , 2014, , .		9
61	Topological principles and developmental algorithms might refine diffusion tractography. Brain Structure and Function, 2019, 224, 1-8.	2.3	9
62	ActiveAx_{ADD}: Toward nonâ€parametric and orientationally invariant axon diameter distribution mapping using PGSE. Magnetic Resonance in Medicine, 2020, 83, 2322-2330.	3.0	9
63	Analysis of Brain Structural Connectivity Networks and White Matter Integrity in Patients With Mild Cognitive Impairment. Frontiers in Aging Neuroscience, 2022, 14, 793991.	3.4	9
64	Tractostorm 2: Optimizing tractography dissection reproducibility with segmentation protocol dissemination. Human Brain Mapping, 2022, 43, 2134-2147.	3.6	8
65	Classification of multiple sclerosis patients based on structural disconnection: A robust feature selection approach. Journal of Neuroimaging, 2022, 32, 647-655.	2.0	8
66	3-D Residual Eddy Current Field Characterisation: Applied to Diffusion Weighted Magnetic Resonance Imaging. IEEE Transactions on Medical Imaging, 2013, 32, 1515-1525.	8.9	7
67	Porting Matlab Applications to High-Performance C++ Codes: CPU/GPU-Accelerated Spherical Deconvolution of Diffusion MRI Data. Lecture Notes in Computer Science, 2016, , 630-643.	1.3	7
68	Microstructural damage of the cortico-striatal and thalamo-cortical fibers in Fabry disease: a diffusion MRI tractometry study. Neuroradiology, 2020, 62, 1459-1466.	2.2	7
69	Streamline density and lesion volume reveal a posteroâ€“anterior gradient of corpus callosum damage in multiple sclerosis. European Journal of Neurology, 2020, 27, 1076-1082.	3.3	7
70	Inhibition of tyrosine kinase receptors by SU6668 promotes abnormal stromal development at the periphery of carcinomas. British Journal of Cancer, 2009, 100, 1575-1580.	6.4	6
71	3D Printing of Rat Salivary Glands: The Submandibular-Sublingual Complex. Journal of Veterinary Medicine Series C: Anatomia Histologia Embryologia, 2014, 43, 239-244.	0.7	6
72	Accelerated microstructure imaging via convex optimisation for regions with multiple fibres (AMICOx). , 2015, , .		6

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73	A 4D Basis and Sampling Scheme for the Tensor Encoded Multi-Dimensional Diffusion MRI Signal. IEEE Signal Processing Letters, 2020, 27, 790-794.	3.6	6
74	Structural Connectivity Alterations in Operculo-Insular Epilepsy. Brain Sciences, 2021, 11, 1041.	2.3	6
75	Early versus late GDâ€ĐTPA MRI enhancement in experimental glioblastomas. Journal of Magnetic Resonance Imaging, 2011, 33, 550-556.	3.4	5
76	GAMER-MRI in Multiple Sclerosis Identifies the Diffusion-Based Microstructural Measures That Are Most Sensitive to Focal Damage: A Deep-Learning-Based Analysis and Clinico-Biological Validation. Frontiers in Neuroscience, 2021, 15, 647535.	2.8	4
77	Microstructure-Weighted Connectomics in Multiple Sclerosis. Brain Connectivity, 2022, 12, 6-17.	1.7	4
78	GAMER MRI: Gated-attention mechanism ranking of multi-contrast MRI in brain pathology. NeuroImage: Clinical, 2021, 29, 102522.	2.7	4
79	Evaluating reproducibility and subject-specificity of microstructure-informed connectivity. NeuroImage, 2022, 258, 119356.	4.2	4
80	Diffantom: Whole-Brain Diffusion MRI Phantoms Derived from Real Datasets of the Human Connectome Project. Frontiers in Neuroinformatics, 2016, 10, 4.	2.5	3
81	Incorporating outlier information into diffusion-weighted MRI modeling for robust microstructural imaging and structural brain connectivity analyses. NeuroImage, 2022, 247, 118802.	4.2	3
82	MRI characterization of rat brain aging at structural and functional level: Clues for translational applications. Experimental Gerontology, 2021, 152, 111432.	2.8	2
83	Structured sparsity through reweighting and application to diffusion MRI. , 2015, , .		1
84	Data on the verification and validation of segmentation and registration methods for diffusion MRI. Data in Brief, 2016, 8, 871-876.	1.0	1
85	Rivastigmine decreases brain damage in <scp>HIV</scp> patients with mild cognitive deficits. Annals of Clinical and Translational Neurology, 2017, 4, 915-920.	3.7	1
86	A Novel Spatial-Angular Domain Regularisation Approach for Restoration of Diffusion MRI. Mathematics and Visualization, 2019, , 43-53.	0.6	1
87	Enhancing Reliability Of Structural Brain Connectivity With Outlier Adjusted Tractogram Filtering. , 2021, , .		1
88	Neuronal Fiber--tracking via optimal mass transportation. Communications on Pure and Applied Analysis, 2012, 11, 2157-2177.	0.8	1
89	Towards a diffusion image processing validation and accuracy prediction framework. , 2011, , .		0
90	VERDICT Prostate Parameter Estimation with AMICO. Mathematics and Visualization, 2018, , 229-241.	0.6	0

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91	Learning Global Brain Microstructure Maps Using Trainable Sparse Encoders. , 2019, , .		0
92	Cuda Parallelization of Commit Framework for Efficient Microstructure-Informed Tractography. , 2019, , .		0
93	Improving Graph-Based Tractography Plausibility Using Microstructure Information. Mathematics and Visualization, 2019, , 367-375.	0.6	0
94	Improving Tractography Accuracy Using Dynamic Filtering. Mathematics and Visualization, 2021, , 45-54.	0.6	0
95	Fast Fiber Orientation Estimation in Diffusion MRI from kq-Space Sampling and Anatomical Priors. Journal of Imaging, 2021, 7, 226.	3.0	0