

# Alessandro Daducci

## List of Publications by Year in descending order

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95  
papers

5,458  
citations

186209

28  
h-index

106281

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. <i>NeuroImage</i> , 2018, 166, 400-424.	2.1	1,026
2	The challenge of mapping the human connectome based on diffusion tractography. <i>Nature Communications</i> , 2017, 8, 1349.	5.8	956
3	Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data. <i>NeuroImage</i> , 2015, 105, 32-44.	2.1	377
4	The Connectome Mapper: An Open-Source Processing Pipeline to Map Connectomes with MRI. <i>PLoS ONE</i> , 2012, 7, e48121.	1.1	248
5	An evaluation of volume-based morphometry for prediction of mild cognitive impairment and Alzheimer's disease. <i>NeuroImage: Clinical</i> , 2015, 7, 7-17.	1.4	217
6	Limits to anatomical accuracy of diffusion tractography using modern approaches. <i>NeuroImage</i> , 2019, 185, 1-11.	2.1	200
7	COMMIT: Convex Optimization Modeling for Microstructure Informed Tractography. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 246-257.	5.4	188
8	Quantitative Comparison of Reconstruction Methods for Intra-Voxel Fiber Recovery From Diffusion MRI. <i>IEEE Transactions on Medical Imaging</i> , 2014, 33, 384-399.	5.4	145
9	Challenges in diffusion MRI tractography – Lessons learned from international benchmark competitions. <i>Magnetic Resonance Imaging</i> , 2019, 57, 194-209.	1.0	99
10	Microstructure Informed Tractography: Pitfalls and Open Challenges. <i>Frontiers in Neuroscience</i> , 2016, 10, 247.	1.4	96
11	The Connectome Viewer Toolkit: An Open Source Framework to Manage, Analyze, and Visualize Connectomes. <i>Frontiers in Neuroinformatics</i> , 2011, 5, 3.	1.3	95
12	Quantitative mapping of the brain's structural connectivity using diffusion MRI tractography: A review. <i>NeuroImage</i> , 2022, 249, 118870.	2.1	95
13	Tractography dissection variability: What happens when 42 groups dissect 14 white matter bundles on the same dataset?. <i>NeuroImage</i> , 2021, 243, 118502.	2.1	94
14	Structural abnormalities in the thalamus of migraineurs with aura: A multiparametric study at 3 T. <i>Human Brain Mapping</i> , 2014, 35, 1461-1468.	1.9	72
15	Surface-enhanced tractography (SET). <i>NeuroImage</i> , 2018, 169, 524-539.	2.1	69
16	Transient networks of spatio-temporal connectivity map communication pathways in brain functional systems. <i>NeuroImage</i> , 2017, 155, 490-502.	2.1	65
17	A new method for accurate in vivo mapping of human brain connections using microstructural and anatomical information. <i>Science Advances</i> , 2020, 6, eaba8245.	4.7	64
18	Myelin and axon pathology in multiple sclerosis assessed by myelin water and multi-shell diffusion imaging. <i>Brain</i> , 2021, 144, 1684-1696.	3.7	61

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19	Connectivity and tissue microstructural alterations in right and left temporal lobe epilepsy revealed by diffusion spectrum imaging. <i>NeuroImage: Clinical</i> , 2014, 5, 349-358.	1.4	59
20	Tractostorm: The what, why, and how of tractography dissection reproducibility. <i>Human Brain Mapping</i> , 2020, 41, 1859-1874.	1.9	59
21	Robust thalamic nuclei segmentation method based on local diffusion magnetic resonance properties. <i>Brain Structure and Function</i> , 2017, 222, 2203-2216.	1.2	58
22	A new early and automated MRI-based predictor of motor improvement after stroke. <i>Neurology</i> , 2012, 79, 39-46.	1.5	49
23	Sparse regularization for fiber ODF reconstruction: From the suboptimality of and priors to. <i>Medical Image Analysis</i> , 2014, 18, 820-833.	7.0	49
24	Ax<sup>T</sup>ract: Toward microstructure informed tractography. <i>Human Brain Mapping</i> , 2017, 38, 5485-5500.	1.9	47
25	Synthesis and characterization of polyethylenimine-based iron oxide composites as novel contrast agents for MRI. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2009, 22, 77-87.	1.1	46
26	Tractography reproducibility challenge with empirical data (TraCED): The 2017 ISMRM diffusion study group challenge. <i>Journal of Magnetic Resonance Imaging</i> , 2020, 51, 234-249.	1.9	38
27	Global Tractography with Embedded Anatomical Priors for Quantitative Connectivity Analysis. <i>Frontiers in Neurology</i> , 2014, 5, 232.	1.1	34
28	Multicontrast <i>connectometry</i>: A new tool to assess cerebellum alterations in early relapsing&#x2013;remitting multiple sclerosis. <i>Human Brain Mapping</i> , 2015, 36, 1609-1619.	1.9	30
29	Experimental protocol for activation&#x2013;induced manganese&#x2013;enhanced MRI (AIM&#x2013;MRI) based on quantitative determination of Mn content in rat brain by fast <i>T</i><sup>1</sup> mapping. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 1080-1084.	1.9	29
30	What lies beneath? Diffusion EAP-based study of brain tissue microstructure. <i>Medical Image Analysis</i> , 2016, 32, 145-156.	7.0	29
31	Sparse wars: A survey and comparative study of spherical deconvolution algorithms for diffusion MRI. <i>NeuroImage</i> , 2019, 184, 140-160.	2.1	29
32	Resolving bundle-specific intra-axonal T2 values within a voxel using diffusion-relaxation tract-based estimation. <i>NeuroImage</i> , 2021, 227, 117617.	2.1	28
33	A New Advanced <sup>scp</sup>MRI Biomarker for Remyelinated Lesions in Multiple Sclerosis. <i>Annals of Neurology</i> , 2022, 92, 486-502.	2.8	28
34	Spherical Deconvolution of Multichannel Diffusion MRI Data with Non-Gaussian Noise Models and Spatial Regularization. <i>PLoS ONE</i> , 2015, 10, e0138910.	1.1	27
35	Structured sparsity for spatially coherent fibre orientation estimation in diffusion MRI. <i>NeuroImage</i> , 2015, 115, 245-255.	2.1	26
36	Quantitative Analysis of Myelin and Axonal Remodeling in the Uninjured Motor Network After Stroke. <i>Brain Connectivity</i> , 2015, 5, 401-412.	0.8	26

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37	Sensory-motor network topology in multiple sclerosis: Structural connectivity analysis accounting for intrinsic density discrepancy. <i>Human Brain Mapping</i> , 2020, 41, 2951-2963.	1.9	26
38	Migraineurs Without Aura Show Microstructural Abnormalities in the Cerebellum and Frontal Lobe. <i>Cerebellum</i> , 2013, 12, 812-818.	1.4	23
39	DCE-MRI using small-molecular and albumin-binding contrast agents in experimental carcinomas with different stromal content. <i>European Journal of Radiology</i> , 2011, 78, 52-59.	1.2	21
40	A multi-center study: Intra-scan and inter-scan variability of diffusion spectrum imaging. <i>NeuroImage</i> , 2012, 62, 87-94.	2.1	21
41	A Connectome-Based Comparison of Diffusion MRI Schemes. <i>PLoS ONE</i> , 2013, 8, e75061.	1.1	21
42	Higher Order Spherical Harmonics Reconstruction of Fetal Diffusion MRI With Intensity Correction. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 1104-1113.	5.4	20
43	Comparison of diffusion MRI and CLARITY fiber orientation estimates in both gray and white matter regions of human and primate brain. <i>NeuroImage</i> , 2021, 228, 117692.	2.1	20
44	Micro-Structural Brain Alterations in Aviremic HIV+ Patients with Minor Neurocognitive Disorders: A Multi-Contrast Study at High Field. <i>PLoS ONE</i> , 2013, 8, e72547.	1.1	19
45	A multi-contrast MRI study of microstructural brain damage in patients with mild cognitive impairment. <i>NeuroImage: Clinical</i> , 2015, 8, 631-639.	1.4	19
46	VERDICT-MICO: Ultrafast fitting algorithm for non-invasive prostate microstructure characterization. <i>NMR in Biomedicine</i> , 2019, 32, e4019.	1.6	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. <i>Neurologia I Neurochirurgia Polska</i> , 2018, 52, 710-719.	0.6	17
49	Advances in computational and statistical diffusion MRI. <i>NMR in Biomedicine</i> , 2019, 32, e3805.	1.6	17
50	Insights from the IronTract challenge: Optimal methods for mapping brain pathways from multi-shell diffusion MRI. <i>NeuroImage</i> , 2022, 257, 119327.	2.1	17
51	Fast and high-resolution myelin water imaging: Accelerating multi-echo GRASE with CAIPIRINHA. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 209-222.	1.9	16
52	Comparison of non-parametric T2 relaxometry methods for myelin water quantification. <i>Medical Image Analysis</i> , 2021, 69, 101959.	7.0	16
53	Bundle myelin fraction (BMF) mapping of different white matter connections using microstructure informed tractography. <i>NeuroImage</i> , 2022, 249, 118922.	2.1	15
54	Diagnostic approaches to predict persistent post-traumatic symptoms after mild traumatic brain injury – a literature review. <i>International Journal of Neuroscience</i> , 2016, 126, 289-298.	0.8	13

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55	Hierarchical Microstructure Informed Tractography. <i>Brain Connectivity</i> , 2021, 11, 75-88.	0.8	13
56	Surface-driven registration method for the structure-informed segmentation of diffusion MR images. <i>NeuroImage</i> , 2016, 139, 450-461.	2.1	12
57	Bundle-Specific Axon Diameter Index as a New Contrast to Differentiate White Matter Tracts. <i>Frontiers in Neuroscience</i> , 2021, 15, 646034.	1.4	11
58	Manganese-enhanced magnetic resonance imaging investigation of the interferon- $\gamma$ model of depression in rats. <i>Magnetic Resonance Imaging</i> , 2014, 32, 529-534.	1.0	10
59	DCE-MRI Data Analysis for Cancer Area Classification. <i>Methods of Information in Medicine</i> , 2009, 48, 248-253.	0.7	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. <i>Brain Structure and Function</i> , 2019, 224, 1-8.	1.2	9
62	ActiveAx<sub>ADD</sub>: Toward non- $\epsilon$ -parametric and orientationally invariant axon diameter distribution mapping using PGSE. <i>Magnetic Resonance in Medicine</i> , 2020, 83, 2322-2330.	1.9	9
63	Analysis of Brain Structural Connectivity Networks and White Matter Integrity in Patients With Mild Cognitive Impairment. <i>Frontiers in Aging Neuroscience</i> , 2022, 14, 793991.	1.7	9
64	Tractostorm 2: Optimizing tractography dissection reproducibility with segmentation protocol dissemination. <i>Human Brain Mapping</i> , 2022, 43, 2134-2147.	1.9	8
65	Classification of multiple sclerosis patients based on structural disconnection: A robust feature selection approach. <i>Journal of Neuroimaging</i> , 2022, 32, 647-655.	1.0	8
66	3-D Residual Eddy Current Field Characterisation: Applied to Diffusion Weighted Magnetic Resonance Imaging. <i>IEEE Transactions on Medical Imaging</i> , 2013, 32, 1515-1525.	5.4	7
67	Porting Matlab Applications to High-Performance C++ Codes: CPU/GPU-Accelerated Spherical Deconvolution of Diffusion MRI Data. <i>Lecture Notes in Computer Science</i> , 2016, , 630-643.	1.0	7
68	Microstructural damage of the cortico-striatal and thalamo-cortical fibers in Fabry disease: a diffusion MRI tractometry study. <i>Neuroradiology</i> , 2020, 62, 1459-1466.	1.1	7
69	Streamline density and lesion volume reveal a postero- $\rightarrow$ anterior gradient of corpus callosum damage in multiple sclerosis. <i>European Journal of Neurology</i> , 2020, 27, 1076-1082.	1.7	7
70	Inhibition of tyrosine kinase receptors by SU6668 promotes abnormal stromal development at the periphery of carcinomas. <i>British Journal of Cancer</i> , 2009, 100, 1575-1580.	2.9	6
71	3D Printing of Rat Salivary Glands: The Submandibular-Sublingual Complex. <i>Journal of Veterinary Medicine Series C: Anatomia Histologia Embryologia</i> , 2014, 43, 239-244.	0.3	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.	2.1	6
74	Structural Connectivity Alterations in Operculo-Insular Epilepsy. Brain Sciences, 2021, 11, 1041.	1.1	6
75	Early versus late GDâ€DTPA MRI enhancement in experimental glioblastomas. Journal of Magnetic Resonance Imaging, 2011, 33, 550-556.	1.9	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.	1.4	4
77	Microstructure-Weighted Connectomics in Multiple Sclerosis. Brain Connectivity, 2022, 12, 6-17.	0.8	4
78	GAMER MRI: Gated-attention mechanism ranking of multi-contrast MRI in brain pathology. NeuroImage: Clinical, 2021, 29, 102522.	1.4	4
79	Evaluating reproducibility and subject-specificity of microstructure-informed connectivity. NeuroImage, 2022, 258, 119356.	2.1	4
80	Diffantom: Whole-Brain Diffusion MRI Phantoms Derived from Real Datasets of the Human Connectome Project. Frontiers in Neuroinformatics, 2016, 10, 4.	1.3	3
81	Incorporating outlier information into diffusion-weighted MRI modeling for robust microstructural imaging and structural brain connectivity analyses. NeuroImage, 2022, 247, 118802.	2.1	3
82	MRI characterization of rat brain aging at structural and functional level: Clues for translational applications. Experimental Gerontology, 2021, 152, 111432.	1.2	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.	0.5	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.	1.7	1
86	A Novel Spatial-Angular Domain Regularisation Approach for Restoration of Diffusion MRI. Mathematics and Visualization, 2019, , 43-53.	0.4	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.	0.4	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.	0.4	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.	0.4	0
94	Improving Tractography Accuracy Using Dynamic Filtering. Mathematics and Visualization, 2021, , 45-54.	0.4	0
95	Fast Fiber Orientation Estimation in Diffusion MRI from kq-Space Sampling and Anatomical Priors. Journal of Imaging, 2021, 7, 226.	1.7	0