Daniel C Alexander

List of Publications by Citations

276 papers	14,099 citations	58 h-index	115 g-index
307 ext. papers	17,742 ext. citations	5.3 avg, IF	6.79 L-index

#	Paper	IF	Citations
276	NODDI: practical in vivo neurite orientation dispersion and density imaging of the human brain. *NeuroImage*, **2012**, 61, 1000-16	7.9	1589
275	Evidence for segregated and integrative connectivity patterns in the human Basal Ganglia. *Journal of Neuroscience*, **2008**, 28, 7143-52	6.6	576
274	Orientationally invariant indices of axon diameter and density from diffusion MRI. *NeuroImage*, **2010**, 52, 1374-89	7.9	527
273	Image processing and Quality Control for the first 10,000 brain imaging datasets from UK Biobank. *NeuroImage*, **2018**, 166, 400-424	7.9	415
272	Lateralization of ventral and dorsal auditory-language pathways in the human brain. *NeuroImage*, **2005**, 24, 656-66	7.9	411
271	Deformable registration of diffusion tensor MR images with explicit orientation optimization. *Medical Image Analysis*, **2006**, 10, 764-85	15.4	377
270	Hemispheric asymmetries in language-related pathways: a combined functional MRI and tractography study. *NeuroImage*, **2006**, 32, 388-99	7.9	333
269	Compartment models of the diffusion MR signal in brain white matter: a taxonomy and comparison. *NeuroImage*, **2012**, 59, 2241-54	7.9	314
268	Probabilistic anatomical connectivity derived from the microscopic persistent angular structure of cerebral tissue. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2005**, 360, 893-902	5.8	279
267	A general framework for experiment design in diffusion MRI and its application in measuring direct tissue-microstructure features. *Magnetic Resonance in Medicine*, **2008**, 60, 439-48	4.4	247
266	Persistent angular structure: new insights from diffusion magnetic resonance imaging data. *Inverse Problems*, **2003**, 19, 1031-1046	2.3	247
265	Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data. *NeuroImage*, **2015**, 105, 32-44	7.9	225
264	Non-invasive mapping of corticofugal fibres from multiple motor areas--relevance to stroke recovery. *Brain*, **2006**, 129, 1844-58	11.2	200
263	Validation of in vitro probabilistic tractography. *NeuroImage*, **2007**, 37, 1267-77	7.9	194
262	Axon diameter mapping in the presence of orientation dispersion with diffusion MRI. *NeuroImage*, **2011**, 56, 1301-15	7.9	192
261	Optimal imaging parameters for fiber-orientation estimation in diffusion MRI. *NeuroImage*, **2005**, 27, 357-67	7.9	191
260	Spatial Normalization and Averaging of Diffusion Tensor MRI Data Sets. *NeuroImage*, **2002**, 17, 592-617	7.9	189

259	Multi-compartment microscopic diffusion imaging. *NeuroImage*, **2016**, 139, 346-359	7.9	186
258	Deep gray matter volume loss drives disability worsening in multiple sclerosis. *Annals of Neurology*, **2018**, 83, 210-222	9.4	185
257	Multiple-fiber reconstruction algorithms for diffusion MRI. *Annals of the New York Academy of Sciences*, **2005**, 1064, 113-33	6.5	185
256	An ex vivo imaging pipeline for producing high-quality and high-resolution diffusion-weighted imaging datasets. *Human Brain Mapping*, **2011**, 32, 544-63	5.9	166
255	Imaging brain microstructure with diffusion MRI: practicality and applications. *NMR in Biomedicine*, **2019**, 32, e3841	4.4	161
254	A data-driven model of biomarker changes in sporadic Alzheimer's disease. *Brain*, **2014**, 137, 2564-77	11.2	149
253	Neurite dispersion: a new marker of multiple sclerosis spinal cord pathology?. *Annals of Clinical and Translational Neurology*, **2017**, 4, 663-679	5.3	148
252	Magnetic resonance imaging evidence for presymptomatic change in thalamus and caudate in familial Alzheimer's disease. *Brain*, **2013**, 136, 1399-414	11.2	148
251	Probabilistic Monte Carlo based mapping of cerebral connections utilising whole-brain crossing fibre information. *Lecture Notes in Computer Science*, **2003**, 18, 684-95	0.9	146
250	Progression of regional grey matter atrophy in multiple sclerosis. *Brain*, **2018**, 141, 1665-1677	11.2	146
249	Noninvasive quantification of solid tumor microstructure using VERDICT MRI. *Cancer Research*, **2014**, 74, 1902-12	10.1	144
248	Convergence and parameter choice for Monte-Carlo simulations of diffusion MRI. *IEEE Transactions on Medical Imaging*, **2009**, 28, 1354-64	11.7	143
247	White matter connections reflect changes in voluntary-guided saccades in pre-symptomatic Huntington's disease. *Brain*, **2008**, 131, 196-204	11.2	143
246	Abnormalities of language networks in temporal lobe epilepsy. *NeuroImage*, **2007**, 36, 209-21	7.9	143
245	Quantitative mapping of the per-axon diffusion coefficients in brain white matter. *Magnetic Resonance in Medicine*, **2016**, 75, 1752-63	4.4	138
244	Early development of structural networks and the impact of prematurity on brain connectivity. *NeuroImage*, **2017**, 149, 379-392	7.9	125
243	An event-based model for disease progression and its application in familial Alzheimer's disease and Huntington's disease. *NeuroImage*, **2012**, 60, 1880-9	7.9	125
242	Uncovering the heterogeneity and temporal complexity of neurodegenerative diseases with Subtype and Stage Inference. *Nature Communications*, **2018**, 9, 4273	17.4	125

241	Assessing white matter microstructure of the newborn with multi-shell diffusion MRI and biophysical compartment models. *NeuroImage*, **2014**, 96, 288-99	7.9	123
240	Conventions and nomenclature for double diffusion encoding NMR and MRI. *Magnetic Resonance in Medicine*, **2016**, 75, 82-7	4.4	123
239	Persistent Angular Structure: new insights from diffusion MRI data. Dummy version. *Lecture Notes in Computer Science*, **2003**, 18, 672-83	0.9	118
238	Camino: Diffusion MRI reconstruction and processing. *The Insight Journal*, **2005**,		115
237	Optimal acquisition orders of diffusion-weighted MRI measurements. *Journal of Magnetic Resonance Imaging*, **2007**, 25, 1051-8	5.6	105
236	Contrast and stability of the axon diameter index from microstructure imaging with diffusion MRI. *Magnetic Resonance in Medicine*, **2013**, 70, 711-21	4.4	100
235	Microstructural characterization of normal and malignant human prostate tissue with vascular, extracellular, and restricted diffusion for cytometry in tumours magnetic resonance imaging. *Investigative Radiology*, **2015**, 50, 218-27	10.1	99
234	Advanced diffusion imaging sequences could aid assessing patients with focal cortical dysplasia and epilepsy. *Epilepsy Research*, **2014**, 108, 336-9	3	98
233	Bingham-NODDI: Mapping anisotropic orientation dispersion of neurites using diffusion MRI. *NeuroImage*, **2016**, 133, 207-223	7.9	97
232	The structural plasticity of white matter networks following anterior temporal lobe resection. *Brain* , **2010**, 133, 2348-64	11.2	97
231	The CONNECT project: Combining macro- and micro-structure. *NeuroImage*, **2013**, 80, 273-82	7.9	93
230	PGSE, OGSE, and sensitivity to axon diameter in diffusion MRI: Insight from a simulation study. *Magnetic Resonance in Medicine*, **2016**, 75, 688-700	4.4	82
229	Four distinct trajectories of tau deposition identified in Alzheimer's disease. *Nature Medicine*, **2021**, 27, 871-881	50.5	81
228	Neurite orientation dispersion and density imaging of the healthy cervical spinal cord in vivo. *NeuroImage*, **2015**, 111, 590-601	7.9	80
227	Maximum entropy spherical deconvolution for diffusion MRI. *Lecture Notes in Computer Science*, **2005**, 19, 76-87	0.9	77
226	Optimal acquisition schemes for in vivo quantitative magnetization transfer MRI. *Magnetic Resonance in Medicine*, **2006**, 56, 803-10	4.4	75
225	Optimizing gradient waveforms for microstructure sensitivity in diffusion-weighted MR. *Journal of Magnetic Resonance*, **2010**, 206, 41-51	3	70
224	SANDI: A compartment-based model for non-invasive apparent soma and neurite imaging by diffusion MRI. *NeuroImage*, **2020**, 215, 116835	7.9	69

223	Evaluation of mutant huntingtin and neurofilament proteins as potential markers in Huntington's disease. *Science Translational Medicine*, **2018**, 10,	17.5	67
222	Data-driven models of dominantly-inherited Alzheimer's disease progression. *Brain*, **2018**, 141, 1529-1544	11.2	66
221	Elastic Matching of Diffusion Tensor Images. *Computer Vision and Image Understanding*, **2000**, 77, 233-250	4.3	64
220	Image quality transfer and applications in diffusion MRI. *NeuroImage*, **2017**, 152, 283-298	7.9	63
219	A ranking of diffusion MRI compartment models with in vivo human brain data. *Magnetic Resonance in Medicine*, **2014**, 72, 1785-92	4.4	61
218	Cortical microstructure in young onset Alzheimer's disease using neurite orientation dispersion and density imaging. *Human Brain Mapping*, **2018**, 39, 3005-3017	5.9	55
217	Machine learning based compartment models with permeability for white matter microstructure imaging. *NeuroImage*, **2017**, 150, 119-135	7.9	52
216	Imaging plus X: multimodal models of neurodegenerative disease. *Current Opinion in Neurology*, **2017**, 30, 371-379	7.1	50
215	ApoE influences regional white-matter axonal density loss in Alzheimer's disease. *Neurobiology of Aging*, **2017**, 57, 8-17	5.6	49
214	Image quality transfer via random forest regression: applications in diffusion MRI. *Lecture Notes in Computer Science*, **2014**, 17, 225-32	0.9	49
213	Aging related cognitive changes associated with Alzheimer's disease in Down syndrome. *Annals of Clinical and Translational Neurology*, **2018**, 5, 741-751	5.3	48
212	White matter compartment models for in vivo diffusion MRI at 300mT/m. *NeuroImage*, **2015**, 118, 468-83	7.9	47
211	Cross-scanner and cross-protocol diffusion MRI data harmonisation: A benchmark database and evaluation of algorithms. *NeuroImage*, **2019**, 195, 285-299	7.9	46
210	Bayesian Image Quality Transfer with CNNs: Exploring Uncertainty in dMRI Super-Resolution. *Lecture Notes in Computer Science*, **2017**, 611-619	0.9	46
209	Probabilistic disease progression modeling to characterize diagnostic uncertainty: Application to staging and prediction in Alzheimer's disease. *NeuroImage*, **2019**, 190, 56-68	7.9	46
208	Different patterns of cortical maturation before and after 38 weeks gestational age demonstrated by diffusion MRI in vivo. *NeuroImage*, **2019**, 185, 764-775	7.9	43
207	Neurite orientation and dispersion density imaging (NODDI) detects cortical and corticospinal tract degeneration in ALS. *Journal of Neurology, Neurosurgery and Psychiatry*, **2019**, 90, 404-411	5.5	43
206	Towards higher sensitivity and stability of axon diameter estimation with diffusion-weighted MRI. *NMR in Biomedicine*, **2016**, 29, 293-308	4.4	42

205	Impaired development of the cerebral cortex in infants with congenital heart disease is correlated to reduced cerebral oxygen delivery. *Scientific Reports*, **2017**, 7, 15088	4.9	41
204	The matrix formalism for generalised gradients with time-varying orientation in diffusion NMR. *Journal of Magnetic Resonance*, **2011**, 210, 151-7	3	41
203	Combined diffusion-relaxometry MRI to identify dysfunction in the human placenta. *Magnetic Resonance in Medicine*, **2019**, 82, 95-106	4.4	39
202	Gaussian phase distribution approximations for oscillating gradient spin echo diffusion MRI. *Journal of Magnetic Resonance*, **2013**, 227, 25-34	3	39
201	Multi-modal functional MRI to explore placental function over gestation. *Magnetic Resonance in Medicine*, **2019**, 81, 1191-1204	4.4	38
200	Placenta microstructure and microcirculation imaging with diffusion MRI. *Magnetic Resonance in Medicine*, **2018**, 80, 756-766	4.4	38
199	Using the model-based residual bootstrap to quantify uncertainty in fiber orientations from Q-ball analysis. *IEEE Transactions on Medical Imaging*, **2009**, 28, 535-50	11.7	37
198	MicroTrack: an algorithm for concurrent projectome and microstructure estimation. *Lecture Notes in Computer Science*, **2010**, 13, 183-90	0.9	37
197	Longitudinal neuroanatomical and cognitive progression of posterior cortical atrophy. *Brain*, **2019**, 142, 2082-2095	11.2	36
196	Estimation of pore size in a microstructure phantom using the optimised gradient waveform diffusion weighted NMR sequence. *Journal of Magnetic Resonance*, **2012**, 214, 51-60	3	34
195	Model-based estimation of microscopic anisotropy using diffusion MRI: a simulation study. *NMR in Biomedicine*, **2016**, 29, 672-85	4.4	33
194	Learning From Noisy Labels by Regularized Estimation of Annotator Confusion **2019**,		33
193	Accurate estimation of microscopic diffusion anisotropy and its time dependence in the mouse brain. *NeuroImage*, **2018**, 183, 934-949	7.9	33
192	Information theoretic ranking of four models of diffusion attenuation in fresh and fixed prostate tissue ex vivo. *Magnetic Resonance in Medicine*, **2014**, 72, 1418-26	4.4	32
191	A method for improving the performance of gradient systems for diffusion-weighted MRI. *Magnetic Resonance in Medicine*, **2007**, 58, 763-8	4.4	32
190	Identifying multiple sclerosis subtypes using unsupervised machine learning and MRI data. *Nature Communications*, **2021**, 12, 2078	17.4	32
189	An image-based model of brain volume biomarker changes in Huntington's disease. *Annals of Clinical and Translational Neurology*, **2018**, 5, 570-582	5.3	31
188	High angular resolution diffusion imaging with stimulated echoes: compensation and correction in experiment design and analysis. *NMR in Biomedicine*, **2014**, 27, 918-25	4.4	31

187	Neurite density is reduced in the presymptomatic phase of disease. *Journal of Neurology, Neurosurgery and Psychiatry*, **2019**, 90, 387-394	5.5	31
186	A generative model of realistic brain cells with application to numerical simulation of the diffusion-weighted MR signal. *NeuroImage*, **2019**, 188, 391-402	7.9	30
185	A Regularization Scheme for Diffusion Tensor Magnetic Resonance Images. *Lecture Notes in Computer Science*, **2001**, 92-105	0.9	30
184	DIVE: A spatiotemporal progression model of brain pathology in neurodegenerative disorders. *NeuroImage*, **2019**, 192, 166-177	7.9	29
183	Abnormal Microstructural Development of the Cerebral Cortex in Neonates With Congenital Heart Disease Is Associated With Impaired Cerebral Oxygen Delivery. *Journal of the American Heart Association*, **2019**, 8, e009893	6	29
182	Improved tractography using asymmetric fibre orientation distributions. *NeuroImage*, **2017**, 158, 205-218	7.9	29
181	Eyetracking Metrics in Young Onset Alzheimer's Disease: A Window into Cognitive Visual Functions. *Frontiers in Neurology*, **2017**, 8, 377	4.1	29
180	Data-Driven Sequence of Changes to Anatomical Brain Connectivity in Sporadic Alzheimer's Disease. *Frontiers in Neurology*, **2017**, 8, 580	4.1	29
179	Using high angular resolution diffusion imaging data to discriminate cortical regions. *PLoS ONE*, **2013**, 8, e63842	3.7	28
178	Optimising time-varying gradient orientation for microstructure sensitivity in diffusion-weighted MR. *Journal of Magnetic Resonance*, **2011**, 212, 344-54	3	27
177	Diffusion MRI microstructure models with in vivo human brain Connectome data: results from a multi-group comparison. *NMR in Biomedicine*, **2017**, 30, e3734	4.4	26
176	VERDICT MRI for Prostate Cancer: Intracellular Volume Fraction versus Apparent Diffusion Coefficient. *Radiology*, **2019**, 291, 391-397	20.5	26
175	Susceptibility of brain atrophy to in Alzheimer's disease, evidence from functional prioritization in imaging genetics. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 3162-3167	11.5	25
174	Double oscillating diffusion encoding and sensitivity to microscopic anisotropy. *Magnetic Resonance in Medicine*, **2017**, 78, 550-564	4.4	25
173	Reduced neurite density in the brain and cervical spinal cord in relapsing-remitting multiple sclerosis: A NODDI study. *Multiple Sclerosis Journal*, **2020**, 26, 1647-1657	5	24
172	Mutant huntingtin and neurofilament light have distinct longitudinal dynamics in Huntington's disease. *Science Translational Medicine*, **2020**, 12,	17.5	24
171	An Introduction to Computational Diffusion MRI: the Diffusion Tensor and Beyond. *Mathematics and Visualization*, **2006**, 83-106	0.6	24
170	SVM recursive feature elimination analyses of structural brain MRI predicts near-term relapses in patients with clinically isolated syndromes suggestive of multiple sclerosis. *NeuroImage: Clinical*, **2019**, 24, 102011	5.3	23

169	A tract-specific approach to assessing white matter in preterm infants. *NeuroImage*, **2017**, 157, 675-694	7.9	23
168	Exploiting peak anisotropy for tracking through complex structures **2007**,		23
167	Predicting Alzheimer's disease progression using deep recurrent neural networks. *NeuroImage*, **2020**, 222, 117203	7.9	23
166	Apparatus for Histological Validation of and Magnetic Resonance Imaging of the Human Prostate. *Frontiers in Oncology*, **2017**, 7, 47	5.3	22
165	Multiple Fibers **2009**, 55-72		21
164	Parametric Probability Distribution Functions for Axon Diameters of Corpus Callosum. *Frontiers in Neuroanatomy*, **2016**, 10, 59	3.6	21
163	Uncertainty modelling in deep learning for safer neuroimage enhancement: Demonstration in diffusion MRI. *NeuroImage*, **2021**, 225, 117366	7.9	21
162	Microstructural models for diffusion MRI in breast cancer and surrounding stroma: an ex vivo study. *NMR in Biomedicine*, **2017**, 30, e3679	4.4	20
161	Using diffusion MRI to discriminate areas of cortical grey matter. *NeuroImage*, **2018**, 182, 456-468	7.9	20
160	Disease Progression Modeling in Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2020**, 201, 294-302	10.2	20
159	A framework for optimal whole-sample histological quantification of neurite orientation dispersion in the human spinal cord. *Journal of Neuroscience Methods*, **2016**, 273, 20-32	3	20
158	Deeper Image Quality Transfer: Training Low-Memory Neural Networks for 3D Images. *Lecture Notes in Computer Science*, **2018**, 118-125	0.9	20
157	Multi-study validation of data-driven disease progression models to characterize evolution of biomarkers in Alzheimer's disease. *NeuroImage: Clinical*, **2019**, 24, 101954	5.3	19
156	A new approach to structural integrity assessment based on axial and radial diffusivities. *Functional Neurology*, **2012**, 27, 85-90	2.2	19
155	Fixel-based analysis of the preterm brain: Disentangling bundle-specific white matter microstructural and macrostructural changes in relation to clinical risk factors. *NeuroImage: Clinical*, **2019**, 23, 101820	5.3	18
154	Viable and fixed white matter: diffusion magnetic resonance comparisons and contrasts at physiological temperature. *Magnetic Resonance in Medicine*, **2014**, 72, 1151-61	4.4	18
153	Interactive lesion segmentation with shape priors from offline and online learning. *IEEE Transactions on Medical Imaging*, **2012**, 31, 1698-712	11.7	18
152	Multiple Orderings of Events in Disease Progression. *Lecture Notes in Computer Science*, **2015**, 24, 711-22	0.9	18

151	Relevance of time-dependence for clinically viable diffusion imaging of the spinal cord. *Magnetic Resonance in Medicine*, **2019**, 81, 1247-1264	4.4	18
150	High-fidelity meshes from tissue samples for diffusion MRI simulations. *Lecture Notes in Computer Science*, **2010**, 13, 404-11	0.9	17
149	Cross-scanner and cross-protocol multi-shell diffusion MRI data harmonization: Algorithms and results. *NeuroImage*, **2020**, 221, 117128	7.9	17
148	Structure Tensor Informed Fiber Tractography (STIFT) by combining gradient echo MRI and diffusion weighted imaging. *NeuroImage*, **2012**, 59, 3941-54	7.9	15
147	Axon diameter mapping in crossing fibers with diffusion MRI. *Lecture Notes in Computer Science*, **2011**, 14, 82-9	0.9	15
146	Beyond crossing fibers: tractography exploiting sub-voxel fibre dispersion and neighbourhood structure. *Lecture Notes in Computer Science*, **2013**, 23, 402-13	0.9	15
145	Robust Markers and Sample Sizes for Multicenter Trials of Huntington Disease. *Annals of Neurology*, **2020**, 87, 751-762	9.4	14
144	TADPOLE Challenge: Accurate Alzheimer's disease prediction through crowdsourced forecasting of future data. *Lecture Notes in Computer Science*, **2019**, 11843, 1-10	0.9	14
143	ConFiG: Contextual Fibre Growth to generate realistic axonal packing for diffusion MRI simulation. *NeuroImage*, **2020**, 220, 117107	7.9	14
142	Applying causal models to explore the mechanism of action of simvastatin in progressive multiple sclerosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 11020-11027	11.5	13
141	Sequences of cognitive decline in typical Alzheimer's disease and posterior cortical atrophy estimated using a novel event-based model of disease progression. *Alzheimer's and Dementia*, **2020**, 16, 965-973	1.2	13
140	Uncertainty in Multitask Learning: Joint Representations for Probabilistic MR-only Radiotherapy Planning. *Lecture Notes in Computer Science*, **2018**, 3-11	0.9	13
139	Probing axons using multi-compartmental diffusion in multiple sclerosis. *Annals of Clinical and Translational Neurology*, **2019**, 6, 1595-1605	5.3	12
138	Multiple Fibers **2014**, 105-123		12
137	Degenerative Adversarial NeuroImage Nets: Generating Images that Mimic Disease Progression. *Lecture Notes in Computer Science*, **2019**, 164-172	0.9	12
136	VERDICT MRI validation in fresh and fixed prostate specimens using patient-specific moulds for histological and MR alignment. *NMR in Biomedicine*, **2019**, 32, e4073	4.4	12
135	VERDICT-AMICO: Ultrafast fitting algorithm for non-invasive prostate microstructure characterization. *NMR in Biomedicine*, **2019**, 32, e4019	4.4	12
134	Joint super-resolution and synthesis of 1 mm isotropic MP-RAGE volumes from clinical MRI exams with scans of different orientation, resolution and contrast. *NeuroImage*, **2021**, 237, 118206	7.9	12

133	Multi-parametric quantitative in vivo spinal cord MRI with unified signal readout and image denoising. *NeuroImage*, **2020**, 217, 116884	7.9	11
132	Modeling Alzheimer disease progression using deep recurrent neural networks **2018**,		11
131	Machine learning based compartment models with permeability for white matter microstructure imaging. *Lecture Notes in Computer Science*, **2014**, 17, 257-64	0.9	11
130	The importance of being dispersed: A ranking of diffusion MRI models for fibre dispersion using in vivo human brain data. *Lecture Notes in Computer Science*, **2013**, 16, 74-81	0.9	11
129	Prion propagation estimated from brain diffusion MRI is subtype dependent in sporadic Creutzfeldt-Jakob disease. *Acta Neuropathologica*, **2020**, 140, 169-181	14.3	10
128	Noninvasive diffusion magnetic resonance imaging of brain tumour cell size for the early detection of therapeutic response. *Scientific Reports*, **2020**, 10, 9223	4.9	10
127	Mathematical models for the diffusion magnetic resonance signal abnormality in patients with prion diseases. *NeuroImage: Clinical*, **2015**, 7, 142-54	5.3	10
126	Two-compartment models of the diffusion MR signal in brain white matter. *Lecture Notes in Computer Science*, **2009**, 12, 329-36	0.9	10
125	Experimental studies of g-ratio MRI in ex vivo mouse brain. *NeuroImage*, **2018**, 167, 366-371	7.9	10
124	Optimising oscillating waveform-shape for pore size sensitivity in diffusion-weighted MR. *Microporous and Mesoporous Materials*, **2013**, 178, 11-14	5.3	9
123	Statistical Modeling of Colour Data. *International Journal of Computer Vision*, **2001**, 44, 87-109	10.6	9
122	BrainPainter: A software for the visualisation of brain structures, biomarkers and associated pathological processes. *Lecture Notes in Computer Science*, **2019**, 11846, 112-120	0.9	9
121	An event-based disease progression model and its application to familial Alzheimer's disease. *Lecture Notes in Computer Science*, **2011**, 22, 748-59	0.9	9
120	A simulation system for biomarker evolution in neurodegenerative disease. *Medical Image Analysis*, **2015**, 26, 47-56	15.4	8
119	Bayesian Image Quality Transfer. *Lecture Notes in Computer Science*, **2016**, 265-273	0.9	8
118	Learning Imaging Biomarker Trajectories from Noisy Alzheimer Disease Data Using a Bayesian Multilevel Model. *Lecture Notes in Computer Science*, **2014**, 85-94	0.9	8
117	Modelling, Fitting and Sampling in Diffusion MRI. *Mathematics and Visualization*, **2009**, 3-20	0.6	8
116	Regularized super-resolution for diffusion MRI **2008**,		8

115	Techniques for spatial normalization of diffusion tensor images **2000**, 3979, 470		8
114	Differences in topological progression profile among neurodegenerative diseases from imaging data. *ELife*, **2019**, 8,	8.9	8
113	Microstructural parameter estimation in vivo using diffusion MRI and structured prior information. *Magnetic Resonance in Medicine*, **2016**, 75, 1787-96	4.4	8
112	Machine learning based white matter models with permeability: An experimental study in cuprizone treated in-vivo mouse model of axonal demyelination. *NeuroImage*, **2021**, 224, 117425	7.9	8
111	Sequence of clinical and neurodegeneration events in Parkinson's disease progression. *Brain*, **2021**, 144, 975-988	11.2	8
110	Modeling longitudinal imaging biomarkers with parametric Bayesian multi-task learning. *Human Brain Mapping*, **2019**, 40, 3982-4000	5.9	7
109	Measuring diffusion exchange across the cell membrane with DEXSY (Diffusion Exchange Spectroscopy). *Magnetic Resonance in Medicine*, **2020**, 84, 1543-1551	4.4	7
108	An optimized framework for quantitative magnetization transfer imaging of the cervical spinal cord in vivo. *Magnetic Resonance in Medicine*, **2018**, 79, 2576-2588	4.4	7
107	Efficient Gaussian Process-Based Modelling and Prediction of Image Time Series. *Lecture Notes in Computer Science*, **2015**, 24, 626-37	0.9	7
106	Microstructure Imaging Sequence Simulation Toolbox. *Lecture Notes in Computer Science*, **2016**, 34-44	0.9	7
105	Simplified Luminal Water Imaging for the Detection of Prostate Cancer From Multiecho T MR Images. *Journal of Magnetic Resonance Imaging*, **2019**, 50, 910-917	5.6	7
104	Training data distribution significantly impacts the estimation of tissue microstructure with machine learning. *Magnetic Resonance in Medicine*, **2022**, 87, 932-947	4.4	7
103	Evolution of white matter damage in amyotrophic lateral sclerosis. *Annals of Clinical and Translational Neurology*, **2020**, 7, 722-732	5.3	6
102	Augmenting Dementia Cognitive Assessment With Instruction-Less Eye-Tracking Tests. *IEEE Journal of Biomedical and Health Informatics*, **2020**, 24, 3066-3075	7.2	6
101	Microstructure Characterization of Bone Metastases from Prostate Cancer with Diffusion MRI: Preliminary Findings. *Frontiers in Oncology*, **2018**, 8, 26	5.3	6
100	Model-based registration to correct for motion between acquisitions in diffusion MR imaging **2008**,		6
99	DeepReg: a deep learning toolkit for medical image registration. *Journal of Open Source Software*, **2020**, 5, 2705	5.2	6
98	Multi-stage Prediction Networks for Data Harmonization. *Lecture Notes in Computer Science*, **2019**, 411-419	0.9	6

97	Deep Learning for Low-Field to High-Field MR: Image Quality Transfer with Probabilistic Decimation Simulator. *Lecture Notes in Computer Science*, **2019**, 58-70	0.9	6
96	Acquiring and Predicting Multidimensional Diffusion (MUDI) Data: An Open Challenge. *Mathematics and Visualization*, **2020**, 195-208	0.6	6
95	Gleason Grading of Prostate Tumours with Max-Margin Conditional Random Fields. *Lecture Notes in Computer Science*, **2014**, 85-92	0.9	6
94	Image Processing and Quality Control for the first 10,000 Brain Imaging Datasets from UK Biobank		6
93	Data-Driven multi-Contrast spectral microstructure imaging with InSpect: INtegrated SPECTral component estimation and mapping. *Medical Image Analysis*, **2021**, 71, 102045	15.4	6
92	Axon radius measurements in vivo from diffusion MRI: a feasibility study **2007**,		5
91	Characterizing the spatiotemporal variability of Alzheimer disease pathology		5
90	Current Applications and Future Promises of Machine Learning in Diffusion MRI. *Mathematics and Visualization*, **2019**, 105-121	0.6	4
89	InSpect: INtegrated SPECTral Component Estimation and Mapping for Multi-contrast Microstructural MRI. *Lecture Notes in Computer Science*, **2019**, 755-766	0.9	4
88	Microscopic susceptibility anisotropy imaging. *Magnetic Resonance in Medicine*, **2020**, 84, 2739-2753	4.4	4
87	In vivo estimation of dispersion anisotropy of neurites using diffusion MRI. *Lecture Notes in Computer Science*, **2014**, 17, 241-8	0.9	4
86	A Vertex Clustering Model for Disease Progression: Application to Cortical Thickness Images. *Lecture Notes in Computer Science*, **2017**, 134-145	0.9	4
85	Active imaging with dual spin-echo diffusion MRI. *Lecture Notes in Computer Science*, **2009**, 21, 264-75	0.9	4
84	Can T2-spectroscopy resolve submicrometer axon diameters?. *Lecture Notes in Computer Science*, **2013**, 23, 607-18	0.9	4
83	Deep learning model fitting for diffusion-relaxometry: a comparative study		4
82	Quantitative detection and staging of presymptomatic cognitive decline in familial Alzheimer's disease: a retrospective cohort analysis. *Alzheimer's Research and Therapy*, **2020**, 12, 126	9	4
81	In Utero Diffusion MRI: Challenges, Advances, and Applications. *Topics in Magnetic Resonance Imaging*, **2019**, 28, 255-264	2.3	4
80	The sequence of structural, functional and cognitive changes in multiple sclerosis. *NeuroImage: Clinical*, **2021**, 29, 102550	5.3	4

79	Detection of covert lesions in focal epilepsy using computational analysis of multimodal magnetic resonance imaging data. *Epilepsia*, **2021**, 62, 807-816	6.4	4
78	Improving the characterization of meningioma microstructure in proton therapy from conventional apparent diffusion coefficient measurements using Monte Carlo simulations of diffusion MRI. *Medical Physics*, **2021**, 48, 1250-1261	4.4	4
77	On the potential for mapping apparent neural soma density via a clinically viable diffusion MRI protocol. *NeuroImage*, **2021**, 239, 118303	7.9	4
76	Diffusion-Tensor Image Registration. *Mathematics and Visualization*, **2006**, 327-342	0.6	4
75	Multimodality characterization of microstructure by the combination of diffusion NMR and time-domain diffuse optical data. *Physics in Medicine and Biology*, **2014**, 59, 2639-58	3.8	3
74	O2-05-01: A DATA-DRIVEN MODEL OF BIOMARKER CHANGES IN SPORADIC ALZHEIMER'S DISEASE **2014**, 10, P172-P172		3
73	Diffusion Tensor Orientation Matching for Image Registration **2003**,		3
72	Learning to Segment When Experts Disagree. *Lecture Notes in Computer Science*, **2020**, 179-190	0.9	3
71	Select and retrieve via direct upsampling network (SARDU-Net): a data-driven, model-free, deep learning approach for quantitative MRI protocol design		3
70	Uncovering the heterogeneity and temporal complexity of neurodegenerative diseases with Subtype and Stage Inference		3
69	Cognitive Changes associated with Alzheimer disease in Down syndrome		3
68	Predicting Alzheimer disease progression using deep recurrent neural networks		3
67	Higher-order diffusion MRI characterization of mesorectal lymph nodes in rectal cancer. *Magnetic Resonance in Medicine*, **2020**, 84, 348-364	4.4	3
66	Characterizing the Clinical Features and Atrophy Patterns of -Related Frontotemporal Dementia With Disease Progression Modeling. *Neurology*, **2021**, 97, e941-e952	6.5	3
65	P2-144: Model-Based Comparison of Autosomal-Dominant and Late-Onset Alzheimer's Disease Progression in the Dian and ADNI Studies **2016**, 12, P668-P669		3
64	Validation of low-dose lung cancer PET-CT protocol and PET image improvement using machine learning. *Physica Medica*, **2021**, 81, 285-294	2.7	3
63	Diffusion magnetic resonance imaging assessment of regional white matter maturation in preterm neonates. *Neuroradiology*, **2021**, 63, 573-583	3.2	3
62	On the generalizability of diffusion MRI signal representations across acquisition parameters, sequences and tissue types: Chronicles of the MEMENTO challenge. *NeuroImage*, **2021**, 240, 118367	7.9	3

61	Contextual Fibre Growth to Generate Realistic Axonal Packing for Diffusion MRI Simulation. *Lecture Notes in Computer Science*, **2019**, 429-440	0.9	2
60	Diffusion microscopic MRI of the mouse embryo: Protocol and practical implementation in the splotch mouse model. *Magnetic Resonance in Medicine*, **2015**, 73, 731-9	4.4	2
59	Analyzing large Alzheimer's disease cognitive datasets: Considerations and challenges. *Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring*, **2020**, 12, e12135	5.2	2
58	Advanced Methods to Study White Matter Microstructure **2014**, 156-163		2
57	A method for non-rigid registration of diffusion tensor magnetic resonance images **2003**, 5032, 1186		2
56	Revealing the Timeline of Structural MRI Changes in Premanifest to Manifest Huntington Disease. *Neurology: Genetics*, **2021**, 7, e617	3.8	2
55	Disease Knowledge Transfer across Neurodegenerative Diseases. *Lecture Notes in Computer Science* , **2019**, 11765, 860-868	0.9	2
54	A Framework for Calculating Time-Efficient Diffusion MRI Protocols for Anisotropic IVIM and An Application in the Placenta. *Mathematics and Visualization*, **2019**, 251-263	0.6	2
53	Modelling Non-stationary and Non-separable Spatio-Temporal Changes in Neurodegeneration via Gaussian Process Convolution. *Lecture Notes in Computer Science*, **2015**, 35-44	0.9	2
52	Longitudinal dynamics of mutant huntingtin and neurofilament light in Huntington's disease: the prospective HD-CSF study		2
51	In-vivo estimates of axonal characteristics using optimized diffusion MRI protocols for single fibre orientation. *Lecture Notes in Computer Science*, **2010**, 13, 623-30	0.9	2
50	On the generalizability of diffusion MRI signal representations across acquisition parameters, sequences and tissue types: chronicles of the MEMENTO challenge		2
49	Comparison of Neurite Orientation Dispersion and Density Imaging and Two-Compartment Spherical Mean Technique Parameter Maps in Multiple Sclerosis. *Frontiers in Neurology*, **2021**, 12, 662855	4.1	2
48	A Computationally Efficient Approach to Segmentation of the Aorta and Coronary Arteries Using Deep Learning. *IEEE Access*, **2021**, 9, 108873-108888	3.5	2
47	Deep Learning Model Fitting for Diffusion-Relaxometry: A Comparative Study. *Mathematics and Visualization*, **2021**, 159-172	0.6	2
46	Ordinal SuStaIn: Subtype and Stage Inference for Clinical Scores, Visual Ratings, and Other Ordinal Data. *Frontiers in Artificial Intelligence*, **2021**, 4, 613261	3	2
45	pySuStaIn: a Python implementation of the Subtype and Stage Inference algorithm.. *SoftwareX*, **2021**, 16, 100811-100811	2.7	2
44	Measuring Microscopic Anisotropy with Diffusion Magnetic Resonance: From Material Science to Biomedical Imaging. *Mathematics and Visualization*, **2017**, 229-255	0.6	1

43	Concepts of Diffusion in MRI **2016**, 23-35		1
42	An algorithm to estimate anatomical connectivity between brain regions using diffusion MRI. *Magnetic Resonance Imaging*, **2013**, 31, 353-8	3.3	1
41	[P1243]: MULTIPLE DISTINCT ATROPHY PATTERNS FOUND IN GENETIC FRONTOTEMPORAL DEMENTIA USING SUBTYPE AND STAGE INFERENCE (SUSTAIN) **2017**, 13, P453-P454		1
40	Quantifying Placental Microcirculation and Microstructure with Anisotropic IVIM Models. *Placenta*, **2017**, 57, 290-291	3.4	1
39	[IC-P-154]: CHARACTERISING THE PROGRESSION OF ALZHEIMER's DISEASE SUBTYPES USING SUBTYPE AND STAGE INFERENCE (SUSTAIN) **2017**, 13, P116-P117		1
38	Ranking diffusion-MRI models with in-vivo human brain data **2013**,		1
37	Foveation for Segmentation of Mega-Pixel Histology Images. *Lecture Notes in Computer Science*, **2020**, 561-571	0.9	1
36	Data-Driven Multi-contrast Spectral Microstructure Imaging with InSpect. *Lecture Notes in Computer Science*, **2020**, 375-385	0.9	1
35	Predicting Clinically Definite Multiple Sclerosis from Onset Using SVM. *Lecture Notes in Computer Science*, **2012**, 116-123	0.9	1
34	Application of mechanistic methods to clinical trials in multiple sclerosis: the simvastatin case		1
33	Quantitation of brain tumour microstructure response to Temozolomide therapy using non-invasive VERDICT MRI		1
32	Progression of regional grey matter atrophy in multiple sclerosis		1
31	Axon diameter mapping in the presence of orientation dispersion with diffusion MRI. *Lecture Notes in Computer Science*, **2010**, 13, 640-7	0.9	1
30	CRAFT (Cerclage after full dilatation caesarean section): protocol of a mixed methods study investigating the role of previous in-labour caesarean section in preterm birth risk. *BMC Pregnancy and Childbirth*, **2020**, 20, 698	3.2	1
29	Evaluation of PSA and PSA Density in a Multiparametric Magnetic Resonance Imaging-Directed Diagnostic Pathway for Suspected Prostate Cancer: The INNOVATE Trial. *Cancers*, **2021**, 13,	6.6	1
28	Training Data Distribution Significantly Impacts the Estimation of Tissue Microstructure with Machine Learning		1
27	P1-009: A Data-Driven Comparison of the Progression of Brain Atrophy in Posterior Cortical Atrophy and Alzheimer's Disease **2016**, 12, P401-P402		1
26	Learning Transition Times in Event Sequences: The Temporal Event-Based Model of Disease Progression. *Lecture Notes in Computer Science*, **2021**, 583-595	0.9	1

25	A Multi-Study Model-Based Evaluation of the Sequence of Imaging and Clinical Biomarker Changes in Huntington's Disease. *Frontiers in Big Data*, **2021**, 4, 662200	2.8	1
24	Temporal Progression Patterns of Brain Atrophy in Corticobasal Syndrome and Progressive Supranuclear Palsy Revealed by Subtype and Stage Inference (SuStaIn).. *Frontiers in Neurology*, **2022**, 13, 814768	4.1	1
23	AlzEye: longitudinal record-level linkage of ophthalmic imaging and hospital admissions of 353 157 patients in London, UK.. *BMJ Open*, **2022**, 12, e058552	3	1
22	Ten years of image analysis and machine learning competitions in dementia.. *NeuroImage*, **2022**, 119083	7.9	1
21	Identifying and evaluating clinical subtypes of Alzheimer's disease in care electronic health records using unsupervised machine learning. *BMC Medical Informatics and Decision Making*, **2021**, 21, 343	3.6	1
20	IC-P-134: Neurite orientation dispersion and density imaging (NODDI) in young-onset Alzheimer's disease and its syndromic variants **2015**, 11, P91-P91		0
19	Degenerative adversarial neuroimage nets for brain scan simulations: Application in ageing and dementia. *Medical Image Analysis*, **2021**, 75, 102257	15.4	0
18	Multiple b-values improve discrimination of cortical gray matter regions using diffusion MRI: an experimental validation with a data-driven approach. *Magnetic Resonance Materials in Physics, Biology, and Medicine*, **2021**, 34, 677-687	2.8	0
17	Inter-Cohort Validation of SuStaIn Model for Alzheimer's Disease. *Frontiers in Big Data*, **2021**, 4, 661110	2.8	0
16	P1-121: Linking Gene Pathways and Brain Atrophy in Alzheimer's Disease **2016**, 12, P449-P450		0
15	Learning to Address Intra-segment Misclassification in Retinal Imaging. *Lecture Notes in Computer Science*, **2021**, 482-492	0.9	0
14	Generalised Super Resolution for Quantitative MRI Using Self-supervised Mixture of Experts. *Lecture Notes in Computer Science*, **2021**, 44-54	0.9	0
13	Pleuroparenchymal fibroelastosis in idiopathic pulmonary fibrosis: Survival analysis using visual and computer-based computed tomography assessment. *EClinicalMedicine*, **2021**, 38, 101009	11.3	0
12	Opportunities and Barriers for Adoption of a Decision-Support Tool for Alzheimer's Disease. *ACM Transactions on Computing for Healthcare*, **2021**, 2, 1-19	2.6	0
11	Anisotropy in the Human Placenta in Pregnancies Complicated by Fetal Growth Restriction. *Mathematics and Visualization*, **2021**, 263-276	0.6	0
10	Guest Editorial Special Issue on Computational Diffusion MRI. *IEEE Transactions on Medical Imaging*, **2007**, 26, 1425-1427	11.7	
9	Presumed small vessel disease, imaging and cognition markers in the Alzheimer's Disease Neuroimaging Initiative. *Brain Communications*, **2021**, 3, fcab226	4.5	
8	Learning Task-Specific and Shared Representations in Medical Imaging. *Lecture Notes in Computer Science*, **2019**, 374-383	0.9	

List of Publications

7	Model-Based Estimation of Microscopic Anisotropy in Macroscopically Isotropic Substrates Using Diffusion MRI. *Lecture Notes in Computer Science*, **2015**, 24, 699-710	0.9
6	An Unsupervised Group Average Cortical Parcellation Using Diffusion MRI to Probe Cytoarchitecture. *Mathematics and Visualization*, **2017**, 145-156	0.6
5	Detecting and Classifying Nuclei on a Budget. *Lecture Notes in Computer Science*, **2017**, 77-86	0.9
4	Modelling Vascularity in Breast Cancer and Surrounding Stroma Using Diffusion MRI and Intravoxel Incoherent Motion. *Lecture Notes in Computer Science*, **2014**, 380-386	0.9
3	VERDICT Prostate Parameter Estimation with AMICO. *Mathematics and Visualization*, **2018**, 229-241	0.6
2	Uncertainty-Aware Annotation Protocol to Evaluate Deformable Registration Algorithms. *IEEE Transactions on Medical Imaging*, **2021**, 40, 2053-2065	11.7
1	Deep Learning-Based Long Term Mortality Prediction in the National Lung Screening Trial. *IEEE Access*, **2022**, 10, 34369-34378	3.5