

# Els Fieremans

## List of Publications by Year in descending order

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Version: 2024-02-01

85  
papers

8,379  
citations

94433

37  
h-index

74163

75  
g-index

89  
all docs

89  
docs citations

89  
times ranked

9146  
citing authors

#	ARTICLE	IF	CITATIONS
1	Obstructive Sleep Apnea and Hypertension with Longitudinal Amyloid- $\beta^2$ Burden and Cognitive Changes. American Journal of Respiratory and Critical Care Medicine, 2022, 206, 632-636.	5.6	7
2	Reproducibility of the Standard Model of diffusion in white matter on clinical MRI systems. NeuroImage, 2022, 257, 119290.	4.2	15
3	Multi-shell diffusion MR imaging and brain microstructure after mild traumatic brain injury: A focus on working memory. , 2022, , 393-403.		0
4	Training a neural network for Gibbs and noise removal in diffusion MRI. Magnetic Resonance in Medicine, 2021, 85, 413-428.	3.0	35
5	Improved Task-based Functional MRI Language Mapping in Patients with Brain Tumors through Marchenko-Pastur Principal Component Analysis Denoising. Radiology, 2021, 298, 365-373.	7.3	19
6	The brain after COVID-19: Compensatory neurogenesis or persistent neuroinflammation?. EclinicalMedicine, 2021, 31, 100684.	7.1	16
7	Measurement of cellular-interstitial water exchange time in tumors based on diffusion-time-dependent diffusional kurtosis imaging. NMR in Biomedicine, 2021, 34, e4496.	2.8	15
8	Realistic Microstructure Simulator (RMS): Monte Carlo simulations of diffusion in three-dimensional cell segmentations of microscopy images. Journal of Neuroscience Methods, 2021, 350, 109018.	2.5	19
9	Simultaneous Multislice for Accelerating Diffusion MRI in Clinical Neuroradiology Protocols. American Journal of Neuroradiology, 2021, 42, 1437-1443.	2.4	4
10	Assessment of myofiber microstructure changes due to atrophy and recovery with time-dependent diffusion MRI. NMR in Biomedicine, 2021, 34, e4534.	2.8	5
11	Nanostructure-specific X-ray tomography reveals myelin levels, integrity and axon orientations in mouse and human nervous tissue. Nature Communications, 2021, 12, 2941.	12.8	33
12	Removal of partial Fourier-induced Gibbs (RPC) ringing artifacts in MRI. Magnetic Resonance in Medicine, 2021, 86, 2733-2750.	3.0	12
13	Connectome 2.0: Developing the next-generation ultra-high gradient strength human MRI scanner for bridging studies of the micro-, meso- and macro-connectome. NeuroImage, 2021, 243, 118530.	4.2	58
14	Effect of intravoxel incoherent motion on diffusion parameters in normal brain. NeuroImage, 2020, 204, 116228.	4.2	14
15	Retrieving neuronal orientations using 3D scanning SAXS and comparison with diffusion MRI. NeuroImage, 2020, 204, 116214.	4.2	20
16	Assessment of cognitive and neural recovery in survivors of pediatric brain tumors in a pilot clinical trial using metformin. Nature Medicine, 2020, 26, 1285-1294.	30.7	65
17	The impact of realistic axonal shape on axon diameter estimation using diffusion MRI. NeuroImage, 2020, 223, 117228.	4.2	40
18	Diffusion Kurtosis Imaging Reveals Optic Tract Damage That Correlates with Clinical Severity in Glaucoma. , 2020, 2020, 1746-1749.		5

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19	Impact of MR-guided PET reconstruction on tau detection and quantification with [ 18 F]â€â€240. Alzheimer's and Dementia, 2020, 16, e037977.	0.8	1
20	In vivo observation and biophysical interpretation of time-dependent diffusion in human cortical gray matter. NeuroImage, 2020, 222, 117054.	4.2	48
21	Multi-parametric quantitative in vivo spinal cord MRI with unified signal readout and image denoising. NeuroImage, 2020, 217, 116884.	4.2	34
22	A time-dependent diffusion MRI signature of axon caliber variations and beading. Communications Biology, 2020, 3, 354.	4.4	60
23	Diffusion MRI biomarkers of white matter microstructure vary nonmonotonically with increasing cerebral amyloid deposition. Neurobiology of Aging, 2020, 89, 118-128.	3.1	48
24	Noninvasive quantification of axon radii using diffusion MRI. ELife, 2020, 9, .	6.0	137
25	Altered Relationship between Working Memory and Brain Microstructure after Mild Traumatic Brain Injury. American Journal of Neuroradiology, 2019, 40, 1438-1444.	2.4	15
26	MTBI Identification From Diffusion MR Images Using Bag of Adversarial Visual Features. IEEE Transactions on Medical Imaging, 2019, 38, 2545-2555.	8.9	18
27	Along-axon diameter variation and axonal orientation dispersion revealed with 3D electron microscopy: implications for quantifying brain white matter microstructure with histology and diffusion MRI. Brain Structure and Function, 2019, 224, 1469-1488.	2.3	77
28	Identification of Relevant Diffusion MRI Metrics Impacting Cognitive Functions Using a Novel Feature Selection Method. , 2019, , .		1
29	A resting state fMRI analysis pipeline for pooling inference across diverse cohorts: an ENIGMA rs-fMRI protocol. Brain Imaging and Behavior, 2019, 13, 1453-1467.	2.1	49
30	Quantifying brain microstructure with diffusion MRI: Theory and parameter estimation. NMR in Biomedicine, 2019, 32, e3998.	2.8	335
31	Genomic kinship construction to enhance genetic analyses in the human connectome project data. Human Brain Mapping, 2019, 40, 1677-1688.	3.6	14
32	On the scaling behavior of water diffusion in human brain white matter. NeuroImage, 2019, 185, 379-387.	4.2	109
33	Working Memory And Brain Tissue Microstructure: White Matter Tract Integrity Based On Multi-Shell Diffusion MRI. Scientific Reports, 2018, 8, 3175.	3.3	32
34	Miniature pig model of human adolescent brain white matter development. Journal of Neuroscience Methods, 2018, 296, 99-108.	2.5	22
35	Rotationally-invariant mapping of scalar and orientational metrics of neuronal microstructure with diffusion MRI. NeuroImage, 2018, 174, 518-538.	4.2	173
36	TE dependent Diffusion Imaging (TEdDI) distinguishes between compartmental T2 relaxation times. NeuroImage, 2018, 182, 360-369.	4.2	160

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37	Integration of routine QA data into mega-analysis may improve quality and sensitivity of multisite diffusion tensor imaging studies. <i>Human Brain Mapping</i> , 2018, 39, 1015-1023.	3.6	20
38	White Matter Tract Integrity: An Indicator of Axonal Pathology after Mild Traumatic Brain Injury. <i>Journal of Neurotrauma</i> , 2018, 35, 1015-1020.	3.4	30
39	What dominates the time dependence of diffusion transverse to axons: Intra- or extra-axonal water?. <i>NeuroImage</i> , 2018, 182, 500-510.	4.2	65
40	Obstructive Sleep Apnea Severity Affects Amyloid Burden in Cognitively Normal Elderly. A Longitudinal Study. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2018, 197, 933-943.	5.6	174
41	A Deep Unsupervised Learning Approach Toward MTBI Identification Using Diffusion MRI. , 2018, 2018, 1267-1270.		8
42	Diffusional Kurtosis along the Corticospinal Tract in Adult Normal Pressure Hydrocephalus. <i>American Journal of Neuroradiology</i> , 2018, 39, 2218-2223.	2.4	4
43	Characterization of Prostate Microstructure Using Water Diffusion and NMR Relaxation. <i>Frontiers in Physics</i> , 2018, 6, .	2.1	40
44	Physical and numerical phantoms for the validation of brain microstructural MRI: A cookbook. <i>NeuroImage</i> , 2018, 182, 39-61.	4.2	74
45	Evaluation of the accuracy and precision of the diffusion parameter Estimation with Gibbs and Noise removal pipeline. <i>NeuroImage</i> , 2018, 183, 532-543.	4.2	123
46	Comparison of heritability estimates on resting state fMRI connectivity phenotypes using the ENIGMA analysis pipeline. <i>Human Brain Mapping</i> , 2018, 39, 4893-4902.	3.6	45
47	Quantifying myofiber integrity using diffusion MRI and random permeable barrier modeling in skeletal muscle growth and Duchenne muscular dystrophy model in mice. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 2094-2108.	3.0	21
48	Palliative CT-Guided Cordotomy for Medically Intractable Pain in Patients with Cancer. <i>American Journal of Neuroradiology</i> , 2017, 38, 387-390.	2.4	17
49	Time-Dependent Diffusion in Prostate Cancer. <i>Investigative Radiology</i> , 2017, 52, 405-411.	6.2	58
50	Validation of surface-to-volume ratio measurements derived from oscillating gradient spin echo on a clinical scanner using anisotropic fiber phantoms. <i>NMR in Biomedicine</i> , 2017, 30, e3708.	2.8	16
51	Lipid Metabolism, Abdominal Adiposity, and Cerebral Health in the Amish. <i>Obesity</i> , 2017, 25, 1876-1880.	3.0	8
52	Observation of structural universality in disordered systems using bulk diffusion measurement. <i>Physical Review E</i> , 2017, 96, 061101.	2.1	13
53	<i>In vivo</i> measurement of membrane permeability and myofiber size in human muscle using time-dependent diffusion tensor imaging and the random permeable barrier model. <i>NMR in Biomedicine</i> , 2017, 30, e3612.	2.8	44
54	Identifying mild traumatic brain injury patients from MR images using bag of visual words. , 2017, , .		7

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55	Diffusion MRI noise mapping using random matrix theory. <i>Magnetic Resonance in Medicine</i> , 2016, 76, 1582-1593.	3.0	541
56	P266: Early Versus Late Changes in White Matter Microstructure with Increasing Amyloid Deposition. <i>Alzheimer's and Dementia</i> , 2016, 12, P729.	0.8	0
57	Quantification of normal-appearing white matter tract integrity in multiple sclerosis: a diffusion kurtosis imaging study. <i>Journal of Neurology</i> , 2016, 263, 1146-1155.	3.6	116
58	Gibbs ringing in diffusion MRI. <i>Magnetic Resonance in Medicine</i> , 2016, 76, 301-314.	3.0	108
59	Denosing of diffusion MRI using random matrix theory. <i>NeuroImage</i> , 2016, 142, 394-406.	4.2	1,208
60	Diffusion-weighted imaging uncovers likely sources of processing-speed deficits in schizophrenia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 13504-13509.	7.1	43
61	Degeneracy in model parameter estimation for multi-compartmental diffusion in neuronal tissue. <i>NMR in Biomedicine</i> , 2016, 29, 33-47.	2.8	252
62	In vivo quantification of demyelination and recovery using compartment-specific diffusion MRI metrics validated by electron microscopy. <i>NeuroImage</i> , 2016, 132, 104-114.	4.2	156
63	In vivo observation and biophysical interpretation of time-dependent diffusion in human white matter. <i>NeuroImage</i> , 2016, 129, 414-427.	4.2	147
64	Differentiating high and low grade pediatric brain tumors using diffusional kurtosis imaging. <i>Journal of Pediatric Neuroradiology</i> , 2015, 02, 301-305.	0.1	0
65	Diffusional kurtosis imaging in hydrocephalus. <i>Magnetic Resonance Imaging</i> , 2015, 33, 531-536.	1.8	8
66	One diffusion acquisition and different white matter models: How does microstructure change in human early development based on WMTI and NODDI?. <i>NeuroImage</i> , 2015, 107, 242-256.	4.2	179
67	N-acetyl-aspartate levels correlate with intra-axonal compartment parameters from diffusion MRI. <i>NeuroImage</i> , 2015, 118, 334-343.	4.2	40
68	Clearance systems in the brain—implications for Alzheimer disease. <i>Nature Reviews Neurology</i> , 2015, 11, 457-470.	10.1	1,127
69	Mesoscopic structure of neuronal tracts from time-dependent diffusion. <i>NeuroImage</i> , 2015, 114, 18-37.	4.2	199
70	Time-dependent diffusion in skeletal muscle with the random permeable barrier model (RPBM): application to normal controls and chronic exertional compartment syndrome patients. <i>NMR in Biomedicine</i> , 2014, 27, 519-528.	2.8	71
71	Revealing mesoscopic structural universality with diffusion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 5088-5093.	7.1	266
72	White matter tract integrity metrics reflect the vulnerability of late-myelinating tracts in Alzheimer's disease. <i>NeuroImage: Clinical</i> , 2014, 4, 64-71.	2.7	106

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73	Stimulated echo diffusion tensor imaging and SPAIR T <sub>2</sub> -weighted imaging in chronic exertional compartment syndrome of the lower leg muscles. Journal of Magnetic Resonance Imaging, 2013, 38, 1073-1082.	3.4	44
74	Stroke Assessment With Diffusional Kurtosis Imaging. Stroke, 2012, 43, 2968-2973.	2.0	206
75	A simple isotropic phantom for diffusional kurtosis imaging. Magnetic Resonance in Medicine, 2012, 68, 537-542.	3.0	15
76	White matter characterization with diffusional kurtosis imaging. NeuroImage, 2011, 58, 177-188.	4.2	479
77	Random walks with barriers. Nature Physics, 2011, 7, 508-514.	16.7	181
78	Monte Carlo study of a two-compartment exchange model of diffusion. NMR in Biomedicine, 2010, 23, 711-724.	2.8	180
79	Transverse diffusivity of cerebral parenchyma predicts visual tracking performance in relapsing-remitting multiple sclerosis. Brain and Cognition, 2009, 71, 410-415.	1.8	21
80	Simulation and experimental verification of the diffusion in an anisotropic fiber phantom. Journal of Magnetic Resonance, 2008, 190, 189-199.	2.1	116
81	Callosal function in MS patients with mild and severe callosal damage as reflected by diffusion tensor imaging. Brain Research, 2008, 1226, 218-225.	2.2	13
82	Validation of models for the diffusion weighted MR signal in brain white matter. , 2008, , .		1
83	The design of anisotropic diffusion phantoms for the validation of diffusion weighted magnetic resonance imaging. Physics in Medicine and Biology, 2008, 53, 5405-5419.	3.0	60
84	SIMULATION OF THE DIFFUSION IN THE INTERSTITIAL SPACE OF A FIBER PHANTOM. , 2007, , .		0
85	POSTPROCESSING OF BRAIN WHITE MATTER FIBER ORIENTATION DISTRIBUTION FUNCTIONS. , 2007, , .		8