

Carl-Fredrik Westin

List of Publications by Year in descending order

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Version: 2024-02-01

73
papers

4,093
citations

257101

24
h-index

133063

59
g-index

76
all docs

76
docs citations

76
times ranked

4503
citing authors

#	ARTICLE	IF	CITATIONS
1	The challenge of mapping the human connectome based on diffusion tractography. <i>Nature Communications</i> , 2017, 8, 1349.	5.8	956
2	Multi-component apparent diffusion coefficients in human brain. <i>NMR in Biomedicine</i> , 1999, 12, 51-62.	1.6	339
3	Q-space trajectory imaging for multidimensional diffusion MRI of the human brain. <i>NeuroImage</i> , 2016, 135, 345-362.	2.1	256
4	Quantification of microscopic diffusion anisotropy disentangles effects of orientation dispersion from microstructure: Applications in healthy volunteers and in brain tumors. <i>NeuroImage</i> , 2015, 104, 241-252.	2.1	216
5	Limits to anatomical accuracy of diffusion tractography using modern approaches. <i>NeuroImage</i> , 2019, 185, 1-11.	2.1	200
6	The white matter query language: a novel approach for describing human white matter anatomy. <i>Brain Structure and Function</i> , 2016, 221, 4705-4721.	1.2	170
7	Conventions and nomenclature for double diffusion encoding NMR and MRI. <i>Magnetic Resonance in Medicine</i> , 2016, 75, 82-87.	1.9	154
8	The DTI Challenge: Toward Standardized Evaluation of Diffusion Tensor Imaging Tractography for Neurosurgery. <i>Journal of Neuroimaging</i> , 2015, 25, 875-882.	1.0	147
9	The link between diffusion MRI and tumor heterogeneity: Mapping cell eccentricity and density by diffusional variance decomposition (DIVIDE). <i>NeuroImage</i> , 2016, 142, 522-532.	2.1	141
10	The extent of diffusion MRI markers of neuroinflammation and white matter deterioration in chronic schizophrenia. <i>Schizophrenia Research</i> , 2015, 161, 113-118.	1.1	115
11	Constrained optimization of gradient waveforms for generalized diffusion encoding. <i>Journal of Magnetic Resonance</i> , 2015, 261, 157-168.	1.2	106
12	Searching for the neurite density with diffusion MRI: Challenges for biophysical modeling. <i>Human Brain Mapping</i> , 2019, 40, 2529-2545.	1.9	103
13	Maxwell-compensated design of asymmetric gradient waveforms for tensor-valued diffusion encoding. <i>Magnetic Resonance in Medicine</i> , 2019, 82, 1424-1437.	1.9	81
14	NMR diffusion-encoding with axial symmetry and variable anisotropy: Distinguishing between prolate and oblate microscopic diffusion tensors with unknown orientation distribution. <i>Journal of Chemical Physics</i> , 2015, 142, 104201.	1.2	70
15	Widespread white matter degeneration preceding the onset of dementia. <i>Alzheimer's and Dementia</i> , 2015, 11, 485.	0.4	67
16	Towards unconstrained compartment modeling in white matter using diffusion-relaxation MRI with tensor-valued diffusion encoding. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 1605-1623.	1.9	67
17	Localized abnormalities in the cingulum bundle in patients with schizophrenia: A Diffusion Tensor tractography study. <i>NeuroImage: Clinical</i> , 2014, 5, 93-99.	1.4	57
18	Tensor-valued diffusion MRI in under 3 minutes: an initial survey of microscopic anisotropy and tissue heterogeneity in intracranial tumors. <i>Magnetic Resonance in Medicine</i> , 2020, 83, 608-620.	1.9	55

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19	A joint compressed-sensing and super-resolution approach for very high-resolution diffusion imaging. <i>NeuroImage</i> , 2016, 125, 386-400.	2.1	49
20	Separating blood and water: Perfusion and free water elimination from diffusion MRI in the human brain. <i>NeuroImage</i> , 2017, 156, 423-434.	2.1	46
21	Combined diffusion-relaxometry microstructure imaging: Current status and future prospects. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2987-3011.	1.9	46
22	Gradient waveform design for tensor-valued encoding in diffusion MRI. <i>Journal of Neuroscience Methods</i> , 2021, 348, 109007.	1.3	44
23	Deep learning based segmentation of brain tissue from diffusion MRI. <i>NeuroImage</i> , 2021, 233, 117934.	2.1	36
24	A comparison of three fiber tract delineation methods and their impact on white matter analysis. <i>NeuroImage</i> , 2018, 178, 318-331.	2.1	32
25	Fiber Tract Clustering on Manifolds With Dual Rooted-Graphs. , 2007, , .		28
26	Cumulant expansions for measuring water exchange using diffusion MRI. <i>Journal of Chemical Physics</i> , 2018, 148, 074109.	1.2	26
27	Adjugate Diffusion Tensors for Geodesic Tractography in White Matter. <i>Journal of Mathematical Imaging and Vision</i> , 2016, 54, 1-14.	0.8	24
28	Linear, planar and spherical tensor-valued diffusion MRI data by free waveform encoding in healthy brain, water, oil and liquid crystals. <i>Data in Brief</i> , 2019, 25, 104208.	0.5	24
29	Motion-compensated gradient waveforms for tensor-valued diffusion encoding by constrained numerical optimization. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 2117-2126.	1.9	23
30	Fusion of white and gray matter geometry: A framework for investigating brain development. <i>Medical Image Analysis</i> , 2014, 18, 1349-1360.	7.0	22
31	Diffusion-informed spatial smoothing of fMRI data in white matter using spectral graph filters. <i>NeuroImage</i> , 2021, 237, 118095.	2.1	22
32	Diffusion Propagator Estimation from Sparse Measurements in a Tractography Framework. <i>Lecture Notes in Computer Science</i> , 2013, 16, 510-517.	1.0	22
33	NMR signal for particles diffusing under potentials: From path integrals and numerical methods to a model of diffusion anisotropy. <i>Physical Review E</i> , 2016, 93, 052602.	0.8	21
34	Abnormal white matter connections between medial frontal regions predict symptoms in patients with first episode schizophrenia. <i>Cortex</i> , 2015, 71, 264-276.	1.1	20
35	Neural networks for parameter estimation in microstructural MRI: Application to a diffusion-relaxation model of white matter. <i>NeuroImage</i> , 2021, 244, 118601.	2.1	20
36	Liquid crystal phantom for validation of microscopic diffusion anisotropy measurements on clinical MRI systems. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 1817-1828.	1.9	18

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37	Sheet Probability Index (SPI): Characterizing the geometrical organization of the white matter with diffusion MRI. <i>NeuroImage</i> , 2016, 142, 260-279.	2.1	17
38	Precise Inference and Characterization of Structural Organization (PICASO) of tissue from molecular diffusion. <i>NeuroImage</i> , 2017, 146, 452-473.	2.1	17
39	Elucidating the relationship between white matter structure, demographic, and clinical variables in schizophrenia—a multicenter harmonized diffusion tensor imaging study. <i>Molecular Psychiatry</i> , 2021, 26, 5357-5370.	4.1	17
40	White matter tracing combined with electric field simulation — A patient-specific approach for deep brain stimulation. <i>NeuroImage: Clinical</i> , 2019, 24, 102026.	1.4	16
41	Quantifying the brain's sheet structure with normalized convolution. <i>Medical Image Analysis</i> , 2017, 39, 162-177.	7.0	15
42	Fast and accurate initialization of the free-water imaging model parameters from multi-shell diffusion MRI. <i>NMR in Biomedicine</i> , 2020, 33, e4219.	1.6	14
43	SNR-enhanced diffusion MRI with structure-preserving low-rank denoising in reproducing kernel Hilbert spaces. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 1614-1632.	1.9	13
44	Image Quality Assessment based on Local Variance. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006, , .	0.5	13
45	Mapping prostatic microscopic anisotropy using linear and spherical b-tensor encoding: A preliminary study. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2025-2033.	1.9	12
46	TWO-TENSOR FIBER TRACTOGRAPHY. , 2007, , .		11
47	New insights about time-varying diffusivity and its estimation from diffusion MRI. <i>Magnetic Resonance in Medicine</i> , 2017, 78, 763-774.	1.9	11
48	Accuracy and precision in super-resolution MRI: Enabling spherical tensor diffusion encoding at ultra-high b-values and high resolution. <i>NeuroImage</i> , 2021, 245, 118673.	2.1	11
49	Histogram analysis of tensor-valued diffusion MRI in meningiomas: Relation to consistency, histological grade and type. <i>NeuroImage: Clinical</i> , 2022, 33, 102912.	1.4	11
50	The association of matrix metalloproteinase 9 (MMP9) with hippocampal volume in schizophrenia: a preliminary MRI study. <i>Neuropsychopharmacology</i> , 2022, 47, 524-530.	2.8	10
51	Q-space trajectory imaging with positivity constraints (QTI+). <i>NeuroImage</i> , 2021, 238, 118198.	2.1	10
52	Tensor Metrics and Charged Containers for 3D Q-space Sample Distribution. <i>Lecture Notes in Computer Science</i> , 2013, 16, 679-686.	1.0	9
53	Characterizing magnetic resonance signal decay due to gaussian diffusion: The path integral approach and a convenient computational method. <i>Concepts in Magnetic Resonance Part A: Bridging Education and Research</i> , 2015, 44, 203-213.	0.2	8
54	Fiber clustering based white matter connectivity analysis for prediction of Autism Spectrum Disorder using diffusion tensor imaging. , 2016, , .		8

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55	Utilizing Mutual Information Analysis to Explore the Relationship Between Gray and White Matter Structural Pathologies in Schizophrenia. <i>Schizophrenia Bulletin</i> , 2019, 45, 386-395.	2.3	7
56	Probing tissue microstructure by diffusion skewness tensor imaging. <i>Scientific Reports</i> , 2021, 11, 135.	1.6	6
57	Sparse deconvolution of higher order tensor for fiber orientation distribution estimation. <i>Artificial Intelligence in Medicine</i> , 2015, 65, 229-238.	3.8	5
58	Striato-nigro-striatal tract dispersion abnormalities in patients with chronic schizophrenia. <i>Brain Imaging and Behavior</i> , 2019, 13, 1236-1245.	1.1	4
59	Estimation of Bounded and Unbounded Trajectories in Diffusion MRI. <i>Frontiers in Neuroscience</i> , 2016, 10, 129.	1.4	3
60	Accelerating joint relaxationâ€diffusion MRI by integrating time division multiplexing and simultaneous multiâ€slice (TDMâ€SMS) strategies. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 2697-2709.	1.9	3
61	Intrinsic and Extrinsic Means on the Circle - A Maximum Likelihood Interpretation. , 2007, , .		2
62	Multi-affine registration using local polynomial expansion. <i>Journal of Zhejiang University: Science C</i> , 2010, 11, 495-503.	0.7	2
63	Combining Surface and Fiber Geometry: An Integrated Approach to Brain Morphology. <i>Lecture Notes in Computer Science</i> , 2013, 16, 50-57.	1.0	2
64	Cortical Surface-Informed Volumetric Spatial Smoothing of fMRI Data via Graph Signal Processing. , 2021, 2021, 3804-3808.		2
65	Two-tensor streamline tractography through white matter intra-voxel fiber crossings: Assessed by fMRI. , 2008, , .		1
66	Characterization Of Spatial Dynamics Of Fmri Data In White Matter Using Diffusion-Informed White Matter Harmonics. , 2021, 2021, 1586-1590.		1
67	NIMG-16. EXPLORATORY EVALUATION OF Q-SPACE TRAJECTORY IMAGING PARAMETERS AS NOVEL IMAGING BIOMARKERS FOR GLIOMAS. <i>Neuro-Oncology</i> , 2020, 22, ii150-ii150.	0.6	1
68	Guest Editorial Special Issue on Computational Diffusion MRI. <i>IEEE Transactions on Medical Imaging</i> , 2007, 26, 1425-1427.	5.4	0
69	Spatially Varying Classification with Localization Certainty in Level Set Segmentation. , 2007, , .		0
70	Connectivity concepts in diffusion and functional MRI. , 2010, , .		0
71	Orthogonal projections for image quality analyses applied to MRI. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021, 20, e202000159.	0.2	0
72	Separating Glioma Hyperintensities From White Matter by Diffusion-Weighted Imaging With Spherical Tensor Encoding. <i>Frontiers in Neuroscience</i> , 2022, 16, 842242.	1.4	0

#	ARTICLE	IF	CITATIONS
73	On Diffusion Tensor Estimation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0