Noam Shemesh

List of Publications by Year
in descending order

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81	3,009	147801	189892
papers	citations	31 h-index	50 g-index

98	98	98	2349
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	SANDI: A compartment-based model for non-invasive apparent soma and neurite imaging by diffusion MRI. NeuroImage, 2020, 215, 116835.	4.2	155
2	Conventions and nomenclature for double diffusion encoding NMR and MRI. Magnetic Resonance in Medicine, 2016, 75, 82-87.	3.0	154
3	Noninvasive quantification of axon radii using diffusion MRI. ELife, 2020, 9, .	6.0	137
4	Protective Effects of Neurotrophic Factorâ€“Secreting Cells in a 6-OHDA Rat Model of Parkinson Disease. Stem Cells and Development, 2009, 18, 1179-1190.	2.1	136
5	The CONNECT project: Combining macro- and micro-structure. NeuroImage, 2013, 80, 273-282.	4.2	121
6	From singleâ€pulsed field gradient to doubleâ€pulsed field gradient MR: gleaning new microstructural information and developing new forms of contrast in MRI. NMR in Biomedicine, 2010, 23, 757-780.	2.8	95
7	Diffusion time dependence of microstructural parameters in fixed spinal cord. NeuroImage, 2018, 182, 329-342.	4.2	95
8	A general framework to quantify the effect of restricted diffusion on the NMR signal with applications to double pulsed field gradient NMR experiments. Journal of Chemical Physics, 2009, 130, 104702.	3.0	93
9	Migration of Neurotrophic Factors-Secreting Mesenchymal Stem Cells Toward a Quinolinic Acid Lesion as Viewed by Magnetic Resonance Imaging. Stem Cells, 2008, 26, 2542-2551.	3.2	72
10	Noninvasive bipolar double-pulsed-field-gradient NMR reveals signatures for pore size and shape in polydisperse, randomly oriented, inhomogeneous porous media. Journal of Chemical Physics, 2010, 133, 044705.	3.0	71
11	Pore diameter mapping using double pulsed-field gradient MRI and its validation using a novel glass capillary array phantom. Journal of Magnetic Resonance, 2011, 208, 128-135.	2.1	70
12	Mesenchymal stem cells induced to secrete neurotrophic factors attenuate quinolinic acid toxicity: A potential therapy for Huntington's disease. Experimental Neurology, 2012, 234, 417-427.	4.1	69
13	Microscopic and compartment shape anisotropies in gray and white matter revealed by angular bipolar double-PFG MR. Magnetic Resonance in Medicine, 2011, 65, 1216-1227.	3.0	67
14	Detecting diffusion-diffraction patterns in size distribution phantoms using double-pulsed field gradient NMR: Theory and experiments. Journal of Chemical Physics, 2010, 132, 034703.	3.0	65
15	Microscopic anisotropy misestimation in sphericalâ€mean single diffusion encoding MRI. Magnetic Resonance in Medicine, 2019, 81, 3245-3261.	3.0	63
16	Measuring small compartmental dimensions with low-q angular double-PGSE NMR: The effect of experimental parameters on signal decay. Journal of Magnetic Resonance, 2009, 198, 15-23.	2.1	62
17	Insights into brain microstructure from in vivo DW-MRS. NeuroImage, 2018, 182, 97-116.	4.2	62
18	Effects of nongaussian diffusion on â€œisotropic diffusionâ€•measurements: An ex-vivo microimaging and simulation study. Journal of Magnetic Resonance, 2019, 300, 84-94.	2.1	58

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19	Correlation tensor magnetic resonance imaging. NeuroImage, 2020, 211, 116605.	4.2	56
20	Fast imaging of mean, axial and radial diffusion kurtosis. NeuroImage, 2016, 142, 381-393.	4.2	54
21	Metabolic properties in stroked rats revealed by relaxation-enhanced magnetic resonance spectroscopy at ultrahigh fields. Nature Communications, 2014, 5, 4958.	12.8	53
22	Evaluation of principal component analysis image denoising on multiâ€exponential MRI relaxometry. Magnetic Resonance in Medicine, 2019, 81, 3503-3514.	3.0	53
23	Accurate noninvasive measurement of cell size and compartment shape anisotropy in yeast cells using doubleâ€pulsed field gradient MR. NMR in Biomedicine, 2012, 25, 236-246.	2.8	51
24	Probing Microscopic Architecture of Opaque Heterogeneous Systems Using Double-Pulsed-Field-Gradient NMR. Journal of the American Chemical Society, 2011, 133, 6028-6035.	13.7	50
25	Accurate estimation of microscopic diffusion anisotropy and its time dependence in the mouse brain. NeuroImage, 2018, 183, 934-949.	4.2	46
26	Diffusion weighted MRI by spatiotemporal encoding: Analytical description and in vivo validations. Journal of Magnetic Resonance, 2013, 232, 76-86.	2.1	44
27	Mapping apparent eccentricity and residual ensemble anisotropy in the gray matter using angular doubleâ€pulsedâ€fieldâ€gradient MRI. Magnetic Resonance in Medicine, 2012, 68, 794-806.	3.0	41
28	White matter biomarkers from fast protocols using axially symmetric diffusion kurtosis imaging. NMR in Biomedicine, 2017, 30, e3741.	2.8	37
29	Observation of restricted diffusion in the presence of a free diffusion compartment: Single- and double-PFG experiments. Journal of Magnetic Resonance, 2009, 200, 214-225.	2.1	36
30	Magnetic Resonance Imaging by Synergistic Diffusion-Diffraction Patterns. Physical Review Letters, 2012, 108, 058103.	7.8	36
31	Measuring small compartment dimensions by probing diffusion dynamics via Non-uniform Oscillating-Gradient Spin-Echo (NOGSE) NMR. Journal of Magnetic Resonance, 2013, 237, 49-62.	2.1	34
32	Diffusion time dependence, power-law scaling, and exchange in gray matter. NeuroImage, 2022, 251, 118976.	4.2	34
33	Adult neurotrophic factor-secreting stem cells: a potential novel therapy for neurodegenerative diseases. Israel Medical Association Journal, 2009, 11, 201-4.	0.1	34
34	Layer-specific connectivity revealed by diffusion-weighted functional MRI in the rat thalamocortical pathway. NeuroImage, 2019, 184, 646-657.	4.2	33
35	Size Distribution Imaging by Non-Uniform Oscillating-Gradient Spin Echo (NOGSE) MRI. PLoS ONE, 2015, 10, e0133201.	2.5	32
36	Nuclear magnetic resonance characterization of general compartment size distributions. New Journal of Physics, 2011, 13, 015010.	2.9	31

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37	Stratification of radiosensitive brain metastases based on an actionable S100A9/RAGE resistance mechanism. Nature Medicine, 2022, 28, 752-765.	30.7	30
38	The effect of experimental parameters on the signal decay in double-PGSE experiments: Negative diffractions and enhancement of structural information. Journal of Magnetic Resonance, 2008, 195, 153-161.	2.1	28
39	Double diffusion encoding and applications for biomedical imaging. Journal of Neuroscience Methods, 2021, 348, 108989.	2.5	27
40	Double oscillating diffusion encoding and sensitivity to microscopic anisotropy. Magnetic Resonance in Medicine, 2017, 78, 550-564.	3.0	26
41	Overcoming apparent Susceptibility-Induced Anisotropy (aSIA) by bipolar double-Pulsed-Field-Gradient NMR. Journal of Magnetic Resonance, 2011, 212, 362-369.	2.1	25
42	Longitudinal Relaxation Enhancement in ¹Hâ€...NMR Spectroscopy of Tissue Metabolites via Spectrally Selective Excitation. Chemistry - A European Journal, 2013, 19, 13002-13008.	3.3	25
43	Mapping axonal density and average diameter using non-monotonic time-dependent gradient-echo MRI. Journal of Magnetic Resonance, 2017, 277, 117-130.	2.1	25
44	Coherent Dynamical Recoupling of Diffusion-Driven Decoherence in Magnetic Resonance. Physical Review Letters, 2013, 111, 080404.	7.8	24
45	Distinguishing neuronal from astrocytic subcellular microstructures using in vivo Double Diffusion Encoded 1H MRS at 21.1 T. PLoS ONE, 2017, 12, e0185232.	2.5	24
46	Late stimulation of the sphenopalatineâ€ganglion in ischemic rats: Improvement in Nâ€acetylâ€aspartate levels and diffusion weighted imaging characteristics as seen by MR. Journal of Magnetic Resonance Imaging, 2010, 31, 1355-1363.	3.4	23
47	Axon Diameters and Myelin Content Modulate Microscopic Fractional Anisotropy at Short Diffusion Times in Fixed Rat Spinal Cord. Frontiers in Physics, 2018, 6, .	2.1	23
48	Diffusion Kurtosis Imaging maps neural damage in the EAE model of multiple sclerosis. NeuroImage, 2020, 208, 116406.	4.2	19
49	Neuroplasticity-driven timing modulations revealed by ultrafast functional magnetic resonance imaging. NeuroImage, 2021, 225, 117446.	4.2	16
50	A rapid-onset diffusion functional MRI signal reflects neuromorphological coupling dynamics. NeuroImage, 2021, 231, 117862.	4.2	16
51	BOLD-fMRI in the mouse auditory pathway. NeuroImage, 2018, 165, 265-277.	4.2	15
52	Correlation Tensor MRI deciphers underlying kurtosis sources in stroke. NeuroImage, 2022, 247, 118833.	4.2	15
53	Optogenetic activation of striatal D1R and D2R cells differentially engages downstream connected areas beyond the basal ganglia. Cell Reports, 2021, 37, 110161.	6.4	15
54	Glucose fluxes in glycolytic and oxidative pathways detected in vivo by deuterium magnetic resonance spectroscopy reflect proliferation in mouse glioblastoma. NeuroImage: Clinical, 2022, 33, 102932.	2.7	14

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55	Short echo time relaxationâ€enhanced MR spectroscopy reveals broad downfield resonances. Magnetic Resonance in Medicine, 2019, 82, 1266-1277.	3.0	13
56	Evidence for microscopic kurtosis in neural tissue revealed by correlation tensor MRI. Magnetic Resonance in Medicine, 2021, 86, 3111-3130.	3.0	13
57	Internal gradient distributions: A susceptibility-derived tensor delivering morphologies by magnetic resonance. Scientific Reports, 2017, 7, 3311.	3.3	12
58	Validation and noise robustness assessment of microscopic anisotropy estimation with clinically feasible double diffusion encoding MRI. Magnetic Resonance in Medicine, 2020, 83, 1698-1710.	3.0	12
59	Diffusion-assisted selective dynamical recoupling: A new approach to measure background gradients in magnetic resonance. Journal of Chemical Physics, 2014, 140, 084205.	3.0	11
60	Transverse relaxation of selectively excited metabolites in stroke at 21.1â€‰T. Magnetic Resonance in Medicine, 2017, 77, 520-528.	3.0	11
61	High temporal resolution functional magnetic resonance spectroscopy in the mouse upon visual stimulation. NeuroImage, 2021, 234, 117973.	4.2	11
62	In vivo Correlation Tensor MRI reveals microscopic kurtosis in the human brain on a clinical 3T scanner. NeuroImage, 2022, 254, 119137.	4.2	11
63	Metabolic T₁ Dynamics and Longitudinal Relaxation Enhancement In Vivo at Ultrahigh Magnetic Fields on Ischemia. Journal of Cerebral Blood Flow and Metabolism, 2014, 34, 1810-1817.	4.3	10
64	On the generalizability of diffusion MRI signal representations across acquisition parameters, sequences and tissue types: Chronicles of the MEMENTO challenge. NeuroImage, 2021, 240, 118367.	4.2	10
65	Longitudinal MRI and MRSI characterization of the quinolinic acid rat model for excitotoxicity: peculiar apparent diffusion coefficients and recovery of Nâ€acetyl aspartate levels. NMR in Biomedicine, 2010, 23, 196-206.	2.8	9
66	Beyond the diffusion standard model in fixed rat spinal cord with combined linear and planar encoding. NeuroImage, 2021, 231, 117849.	4.2	9
67	Soma and Neurite Density MRI (SANDI) of the in-vivo mouse brain and comparison with the Allen Brain Atlas. NeuroImage, 2022, 254, 119135.	4.2	9
68	Higherâ€order diffusion MRI characterization of mesorectal lymph nodes in rectal cancer. Magnetic Resonance in Medicine, 2020, 84, 348-364.	3.0	8
69	High-Resolution 3D in vivo Brain Diffusion Tensor Imaging at Ultrahigh Fields: Following Maturation on Juvenile and Adult Mice. Frontiers in Neuroscience, 2020, 14, 590900.	2.8	8
70	Incomplete initial nutation diffusion imaging: An ultrafast, singleâ€scan approach for diffusion mapping. Magnetic Resonance in Medicine, 2018, 79, 2198-2204.	3.0	5
71	Two-dimensional magnetization-transfer â€“ CPMG MRI reveals tract-specific signatures in fixed rat spinal cord. Journal of Magnetic Resonance, 2018, 297, 124-137.	2.1	4
72	Susceptibility Perturbation MRI Maps Tumor Infiltration into Mesorectal Lymph Nodes. Cancer Research, 2019, 79, 2435-2444.	0.9	4

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73	Short <scp>TE</scp> downfield magnetic resonance spectroscopy in a mouse model of brain glioma. Magnetic Resonance in Medicine, 2022, 88, 524-536.	3.0	4
74	Effective bowel motion reduction in mouse abdominal MRI using hyoscine butylbromide. Magnetic Resonance in Medicine, 2021, 86, 2146-2155.	3.0	3
75	Publisherâ€™s Note: Magnetic Resonance Imaging by Synergistic Diffusion-Diffraction Patterns [Phys. Rev. Lett.108, 058103 (2012)]. Physical Review Letters, 2012, 108, .	7.8	1
76	Shemesh, Westin, and Cohen Reply:. Physical Review Letters, 2013, 110, 109802.	7.8	1
77	Efficient spectroscopic imaging by an optimized encoding of pretargeted resonances. Magnetic Resonance in Medicine, 2017, 77, 511-519.	3.0	1
78	Measuring Microscopic Anisotropy with Diffusion Magnetic Resonance: From Material Science to Biomedical Imaging. Mathematics and Visualization, 2017, , 229-255.	0.6	1
79	Measuring Microstructural Features Using Diffusion MRI. Advances in Magnetic Resonance Technology and Applications, 2020, , 571-604.	0.1	1
80	Mapping apparent eccentricity and residual ensemble anisotropy in the gray matter using angular double-pulsed-field-gradient MRI. Magnetic Resonance in Medicine, 2012, 68, spcone-spcone.	3.0	0
81	Optogenetic Activation of Striatal D1/D2 Medium Spiny Neurons Differentially Engages Downstream Connected Areas Beyond the Basal Ganglia. SSRN Electronic Journal, 0, , .	0.4	0