

Gunther Helms

List of Publications by Year in descending order

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79
papers

4,572
citations

87723

38
h-index

110170

64
g-index

82
all docs

82
docs citations

82
times ranked

6108
citing authors

#	ARTICLE	IF	CITATIONS
1	High-resolution maps of magnetization transfer with inherent correction for RF inhomogeneity and T_1 relaxation obtained from 3D FLASH MRI. <i>Magnetic Resonance in Medicine</i> , 2008, 60, 1396-1407.	1.9	267
2	Regional specificity of MRI contrast parameter changes in normal ageing revealed by voxel-based quantification (VBQ). <i>NeuroImage</i> , 2011, 55, 1423-1434.	2.1	259
3	Widespread age-related differences in the human brain microstructure revealed by quantitative magnetic resonance imaging. <i>Neurobiology of Aging</i> , 2014, 35, 1862-1872.	1.5	248
4	Quantitative FLASH MRI at 3T using a rational approximation of the Ernst equation. <i>Magnetic Resonance in Medicine</i> , 2008, 59, 667-672.	1.9	197
5	Comparison of longitudinal metabolite relaxation times in different regions of the human brain at 1.5 and 3 Tesla. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 1296-1301.	1.9	194
6	Unified segmentation based correction of R_1 brain maps for RF transmit field inhomogeneities (UNICORT). <i>NeuroImage</i> , 2011, 54, 2116-2124.	2.1	168
7	Improved segmentation of deep brain grey matter structures using magnetization transfer (MT) parameter maps. <i>NeuroImage</i> , 2009, 47, 194-198.	2.1	164
8	Optimization and validation of methods for mapping of the radiofrequency transmit field at 3T. <i>Magnetic Resonance in Medicine</i> , 2010, 64, 229-238.	1.9	159
9	MR Spectroscopy Shows Reduced Frontal Lobe Concentrations of N-Acetyl Aspartate in Patients with Juvenile Myoclonic Epilepsy. <i>Epilepsia</i> , 2000, 41, 290-296.	2.6	149
10	Individual voxel-based subtype prediction can differentiate progressive supranuclear palsy from idiopathic parkinson syndrome and healthy controls. <i>Human Brain Mapping</i> , 2011, 32, 1905-1915.	1.9	122
11	MRS shows syndrome differentiated metabolite changes in human-generalized epilepsies. <i>NeuroImage</i> , 2004, 21, 163-172.	2.1	110
12	New tissue priors for improved automated classification of subcortical brain structures on MRI. <i>NeuroImage</i> , 2016, 130, 157-166.	2.1	104
13	Multi-site voxel-based morphometry " Not quite there yet. <i>NeuroImage</i> , 2011, 56, 1164-1170.	2.1	94
14	Identification of scyllo-inositol in proton NMR spectra of human brain in vivo. <i>NMR in Biomedicine</i> , 1993, 6, 105-109.	1.6	90
15	A general linear relaxometry model of R_1 using imaging data. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 1309-1314.	1.9	90
16	Reproducibility of the Structural Brain Connectome Derived from Diffusion Tensor Imaging. <i>PLoS ONE</i> , 2015, 10, e0135247.	1.1	89
17	Neurobiological origin of spurious brain morphological changes: A quantitative MRI study. <i>Human Brain Mapping</i> , 2016, 37, 1801-1815.	1.9	87
18	Brain tissue properties differentiate between motor and limbic basal ganglia circuits. <i>Human Brain Mapping</i> , 2014, 35, 5083-5092.	1.9	82

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19	Increased SNR and reduced distortions by averaging multiple gradient echo signals in 3D FLASH imaging of the human brain at 3T. <i>Journal of Magnetic Resonance Imaging</i> , 2009, 29, 198-204.	1.9	81
20	Increased thalamus levels of glutamate and glutamine (Glx) in patients with idiopathic generalised epilepsy. <i>Journal of Neurology, Neurosurgery and Psychiatry</i> , 2006, 77, 489-494.	0.9	80
21	Differentiation of Typical and Atypical Parkinson Syndromes by Quantitative MR Imaging. <i>American Journal of Neuroradiology</i> , 2011, 32, 2087-2092.	1.2	78
22	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
23	Untreated Glioblastoma Multiforme: Increased Myo-inositol and Glutamine Levels in the Contralateral Cerebral Hemisphere at Proton MR Spectroscopy. <i>Radiology</i> , 2009, 253, 805-812.	3.6	68
24	Disentangling in vivo the effects of iron content and atrophy on the ageing human brain. <i>NeuroImage</i> , 2014, 103, 280-289.	2.1	68
25	Cerebral involvement in axonal Charcot-Marie-Tooth neuropathy caused by mitofusin2 mutations. <i>Journal of Neurology</i> , 2008, 255, 1049-58.	1.8	66
26	Volume correction for edema in single-volume proton MR spectroscopy of contrast-enhancing multiple sclerosis lesions. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 256-263.	1.9	63
27	Restoration of motion-related signal loss and line-shape deterioration of proton MR spectra using the residual water as intrinsic reference. <i>Magnetic Resonance in Medicine</i> , 2001, 46, 395-400.	1.9	62
28	Modeling the influence of TR and excitation flip angle on the magnetization transfer ratio (MTR) in human brain obtained from 3D spoiled gradient echo MRI. <i>Magnetic Resonance in Medicine</i> , 2010, 64, 177-185.	1.9	62
29	Idiopathic-generalized epilepsy shows profound white matter diffusion-tensor imaging alterations. <i>Human Brain Mapping</i> , 2014, 35, 3332-3342.	1.9	60
30	Increased putamen and callosal motor subregion in treatment-naïve boys with Tourette syndrome indicates changes in the bihemispheric motor network. <i>Journal of Child Psychology and Psychiatry and Allied Disciplines</i> , 2011, 52, 306-314.	3.1	59
31	Multiparameter mapping of relaxation (T_1 , T_2^*), proton density and magnetization transfer saturation at 3 T: A multicenter dual-vendor reproducibility and repeatability study. <i>Human Brain Mapping</i> , 2020, 41, 4232-4247.	1.9	59
32	Multiparametric brainstem segmentation using a modified multivariate mixture of Gaussians. <i>NeuroImage: Clinical</i> , 2013, 2, 684-694.	1.4	58
33	The principles of quantification applied to in vivo proton MR spectroscopy. <i>European Journal of Radiology</i> , 2008, 67, 218-229.	1.2	51
34	Optimized high-resolution mapping of magnetization transfer (MT) at 3 Tesla for direct visualization of substructures of the human thalamus in clinically feasible measurement time. <i>Journal of Magnetic Resonance Imaging</i> , 2009, 29, 1285-1292.	1.9	49
35	Regression analysis of metabolite concentrations estimated from localized proton MR spectra of active and chronic multiple sclerosis lesions. <i>Magnetic Resonance in Medicine</i> , 2000, 43, 102-110.	1.9	43
36	Diffusion characteristics of large molecules assessed by proton MRS on a whole-body MR system. <i>Magnetic Resonance Imaging</i> , 2004, 22, 39-46.	1.0	43

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37	Improved Visibility of the Subthalamic Nucleus on High-Resolution Stereotactic MR Imaging by Added Susceptibility (T2*) Contrast Using Multiple Gradient Echoes. American Journal of Neuroradiology, 2007, 28, 1093-1094.	1.2	43
38	<i>In vivo</i> quantification of the bound pool T_1 in human white matter using the binary spin bath model of progressive magnetization transfer saturation. Physics in Medicine and Biology, 2009, 54, N529-N540.	1.6	41
39	Rapid radiofrequency field mapping in vivo using single-shot STEAM MRI. Magnetic Resonance in Medicine, 2008, 60, 739-743.	1.9	38
40	Analysis of 1.5 Tesla proton MR spectra of human brain using LCModel and an imported basis set. Magnetic Resonance Imaging, 1999, 17, 1211-1218.	1.0	35
41	Cerebral metabolic and structural alterations in hereditary spastic paraplegia with thin corpus callosum assessed by MRS and DTI. Neuroradiology, 2006, 48, 893-898.	1.1	35
42	Metabolic Alterations in Brain Autopsies: Proton NMR Identification of Free Glycerol. , 1996, 9, 121-124.		32
43	Noninvasive estimation of tumour viability in a xenograft model of human neuroblastoma with proton magnetic resonance spectroscopy (1H MRS). British Journal of Cancer, 2003, 88, 478-485.	2.9	31
44	No brain structure abnormalities in boys with Tourette's syndrome: A voxel-based morphometry study. Movement Disorders, 2009, 24, 2398-2403.	2.2	31
45	Identification of signal bias in the variable flip angle method by linear display of the algebraic Ernst equation. Magnetic Resonance in Medicine, 2011, 66, 669-677.	1.9	31
46	Increased growth of colorectal liver metastasis following partial hepatectomy. Clinical and Experimental Metastasis, 2013, 30, 681-693.	1.7	27
47	Segmentation of human brain using structural MRI. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2016, 29, 111-124.	1.1	27
48	Investigation and modeling of magnetization transfer effects in two-dimensional multislice turbo spin echo sequences with low constant or variable flip angles at 3 T. Magnetic Resonance in Medicine, 2010, 63, 230-234.	1.9	26
49	Contrast-driven approach to intracranial segmentation using a combination of T2- and T1-weighted 3D MRI data sets. Journal of Magnetic Resonance Imaging, 2006, 24, 790-795.	1.9	25
50	Localized proton magnetic resonance spectroscopy of cerebral abnormalities in children with carbohydrate-deficient glycoprotein syndrome. Acta Paediatrica, International Journal of Paediatrics, 1995, 84, 781-786.	0.7	24
51	Exact algebraization of the signal equation of spoiled gradient echo MRI. Physics in Medicine and Biology, 2010, 55, 4231-4245.	1.6	23
52	Assessment of myelination in hypomyelinating disorders by quantitative MRI. Journal of Magnetic Resonance Imaging, 2012, 36, 1329-1338.	1.9	21
53	Non-negative least squares computation for in vivo myelin mapping using simulated multi-echo spin-echo T_2 decay data. NMR in Biomedicine, 2020, 33, e4277.	1.6	20
54	Serial proton MR spectroscopy and diffusion tensor imaging in infantile Balo's concentric sclerosis. Neuroradiology, 2009, 51, 113-121.	1.1	19

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55	Micro-Structural Brain Alterations in Aviremic HIV+ Patients with Minor Neurocognitive Disorders: A Multi-Contrast Study at High Field. PLoS ONE, 2013, 8, e72547.	1.1	19
56	Simultaneous measurement of saturation and relaxation in human brain by repetitive magnetization transfer pulses. NMR in Biomedicine, 2005, 18, 44-50.	1.6	18
57	A New Targeted Model of Experimental Autoimmune Encephalomyelitis in the Common Marmoset. Brain Pathology, 2016, 26, 452-464.	2.1	18
58	<i>In vivo</i> proton MR spectroscopy findings specific for adenylosuccinate lyase deficiency. NMR in Biomedicine, 2010, 23, 441-445.	1.6	16
59	Structural and quantitative neuroimaging of the common marmoset monkey using a clinical MRI system. Journal of Neuroscience Methods, 2013, 215, 121-131.	1.3	16
60	Pulsed saturation of the standard two-pool model for magnetization transfer. Part I: The steady state. Concepts in Magnetic Resonance, 2004, 21A, 37-49.	1.3	15
61	Basal Cerebral Blood Volume during the Poststimulation Undershoot in BOLD MRI of the Human Brain. Journal of Cerebral Blood Flow and Metabolism, 2011, 31, 82-89.	2.4	14
62	Reducing bias in dual flip angle T ₁ mapping in human brain at 7T. Magnetic Resonance in Medicine, 2020, 84, 1347-1358.	1.9	13
63	Magnetization transfer of water T ₂ relaxation components in human brain: implications for T ₂ -based segmentation of spectroscopic volumes. Magnetic Resonance Imaging, 2001, 19, 803-811.	1.0	12
64	T ₂ -based segmentation of periventricular volumes for quantification of proton magnetic resonance spectra of multiple sclerosis lesions. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2003, 16, 10-16.	1.1	11
65	A Novel SLC6A8 Mutation in a Large Family with X-Linked Intellectual Disability: Clinical and Proton Magnetic Resonance Spectroscopy Data of Both Hemizygous Males and Heterozygous Females. JIMD Reports, 2013, 13, 91-99.	0.7	10
66	Pulsed saturation of the standard two-pool model for magnetization transfer. Part II: The transition to steady state. Concepts in Magnetic Resonance, 2004, 21A, 50-62.	1.3	9
67	Quantitative magnetization transfer by trains of radio frequency pulses in human brain: extension of a free evolution model to continuous-wave-like conditions. Magnetic Resonance Imaging, 2005, 23, 723-731.	1.0	8
68	Interaction of exchange and differential relaxation in the saturation recovery behavior of the binary spin-bath model for magnetization transfer. Concepts in Magnetic Resonance Part A: Bridging Education and Research, 2006, 28A, 291-298.	0.2	8
69	Visualizing dopamine transporter integrity with iodine-123-FP-CIT SPECT in combination with high resolution MRI in the brain of the common marmoset monkey. Journal of Neuroscience Methods, 2012, 210, 195-201.	1.3	8
70	Viewing the effective k-space coverage of MR images: phantom experiments with fast Fourier transform. Magnetic Resonance Imaging, 2010, 28, 87-94.	1.0	7
71	Towards robust glucose chemical exchange saturation transfer imaging in humans at 3T: Arterial input function measurements and the effects of infusion time. NMR in Biomedicine, 2022, 35, e4624.	1.6	7
72	Localized proton magnetic resonance spectroscopy of a cerebellar tumor in a two-year-old child. Child's Nervous System, 1996, 12, 626-9.	0.6	6

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73	Quantification of magnetization transfer by sampling the transient signal using MT-prepared single-shot EPI. <i>Concepts in Magnetic Resonance</i> , 2003, 19A, 149-152.	1.3	6
74	Mapping magnetization transfer saturation (MT _{sat}) in human brain at 7T: Protocol optimization under specific absorption rate constraints. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2562-2576.	1.9	5
75	Pharmacokinetics of the MRI contrast agent gadobutrol in common marmoset monkeys (<i>Callithrix</i>). <i>Magnetic Resonance in Medicine</i> , 2021, 86, 2562-2576.	0.78	14
76	In vivo investigation of the multi-exponential T ₂ decay in human white matter at 7 T: Implications for myelin water imaging at UHF. <i>NMR in Biomedicine</i> , 2021, 34, e4429.	1.6	3
77	MP3RAGE: Simultaneous mapping of T ₁ and B ₁₊ in human brain at 7T. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 2637-2649.	1.9	3
78	Revisiting a historic human brain with magnetic resonance imaging – the first description of a divided central sulcus. <i>Frontiers in Neuroanatomy</i> , 2014, 8, 35.	0.9	2
79	Radiofrequency Bias Correction of Magnetization Prepared Rapid Gradient Echo MRI at 7.0 Tesla Using an External Reference in a Sequential Protocol. <i>Tomography</i> , 2021, 7, 434-451.	0.8	0