Gunther Helms

List of Publications by Year in Descending Order

78 papers	3,647 citations	37 h-index	59 g-index
82 ext. papers	4,325 ext. citations	4.8 avg, IF	5.19 L-index

#	Paper	IF	Citations
78	Mapping magnetization transfer saturation (MT) in human brain at 7T: Protocol optimization under specific absorption rate constraints. *Magnetic Resonance in Medicine*, **2021**, 86, 2562-2576	4.4	0
77	In vivo investigation of the multi-exponential T decay in human white matter at 7 T: Implications for myelin water imaging at UHF. *NMR in Biomedicine*, **2021**, 34, e4429	4.4	1
76	Towards robust glucose chemical exchange saturation transfer imaging in humans at 3 T: Arterial input function measurements and the effects of infusion time. *NMR in Biomedicine*, **2021**, e4624	4.4	1
75	Radiofrequency Bias Correction of Magnetization Prepared Rapid Gradient Echo MRI at 7.0 Tesla Using an External Reference in a Sequential Protocol. *Tomography*, **2021**, 7, 434-451	3.1	
74	Non-negative least squares computation for in vivo myelin mapping using simulated multi-echo spin-echo T decay data. *NMR in Biomedicine*, **2020**, 33, e4277	4.4	5
73	Reducing bias in dual flip angle T -mapping in human brain at 7T. *Magnetic Resonance in Medicine*, **2020**, 84, 1347-1358	4.4	6
72	Multiparameter mapping of relaxation (R1, R2*), proton density and magnetization transfer saturation at 3 T: A multicenter dual-vendor reproducibility and repeatability study. *Human Brain Mapping*, **2020**, 41, 4232-4247	5.9	15
71	New tissue priors for improved automated classification of subcortical brain structures on MRI. *NeuroImage*, **2016**, 130, 157-166	7.9	65
70	Segmentation of human brain using structural MRI. *Magnetic Resonance Materials in Physics, Biology, and Medicine*, **2016**, 29, 111-24	2.8	18
69	A New Targeted Model of Experimental Autoimmune Encephalomyelitis in the Common Marmoset. *Brain Pathology*, **2016**, 26, 452-64	6	14
68	Pharmacokinetics of the MRI contrast agent gadobutrol in common marmoset monkeys (Callithrix jacchus). *Journal of Medical Primatology*, **2016**, 45, 290-296	0.7	3
67	Neurobiological origin of spurious brain morphological changes: A quantitative MRI study. *Human Brain Mapping*, **2016**, 37, 1801-15	5.9	62
66	A general linear relaxometry model of R1 using imaging data. *Magnetic Resonance in Medicine*, **2015** , 73, 1309-14	4.4	66
65	Reproducibility of the Structural Brain Connectome Derived from Diffusion Tensor Imaging. *PLoS ONE*, **2015**, 10, e0135247	3.7	59
64	Idiopathic-generalized epilepsy shows profound white matter diffusion-tensor imaging alterations. *Human Brain Mapping*, **2014**, 35, 3332-42	5.9	39
63	Revisiting a historic human brain with magnetic resonance imaging - the first description of a divided central sulcus. *Frontiers in Neuroanatomy*, **2014**, 8, 35	3.6	2
62	Disentangling in vivo the effects of iron content and atrophy on the ageing human brain. *NeuroImage*, **2014**, 103, 280-289	7.9	47

61	Brain tissue properties differentiate between motor and limbic basal ganglia circuits. *Human Brain Mapping*, **2014**, 35, 5083-92	5.9	63
60	Structural abnormalities in the thalamus of migraineurs with aura: a multiparametric study at 3 T. *Human Brain Mapping*, **2014**, 35, 1461-8	5.9	54
59	Widespread age-related differences in the human brain microstructure revealed by quantitative magnetic resonance imaging. *Neurobiology of Aging*, **2014**, 35, 1862-72	5.6	182
58	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*, **2014**, 13, 91-9	1.9	8
57	Increased growth of colorectal liver metastasis following partial hepatectomy. *Clinical and Experimental Metastasis*, **2013**, 30, 681-93	4.7	19
56	Structural and quantitative neuroimaging of the common marmoset monkey using a clinical MRI system. *Journal of Neuroscience Methods*, **2013**, 215, 121-31	3	14
55	Multiparametric brainstem segmentation using a modified multivariate mixture of Gaussians. *NeuroImage: Clinical*, **2013**, 2, 684-94	5.3	48
54	Micro-structural brain alterations in aviremic HIV+ patients with minor neurocognitive disorders: a multi-contrast study at high field. *PLoS ONE*, **2013**, 8, e72547	3.7	18
53	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	3	7
52	Assessment of myelination in hypomyelinating disorders by quantitative MRI. *Journal of Magnetic Resonance Imaging*, **2012**, 36, 1329-38	5.6	15
51	Regional specificity of MRI contrast parameter changes in normal ageing revealed by voxel-based quantification (VBQ). *NeuroImage*, **2011**, 55, 1423-34	7.9	204
50	Multi-site voxel-based morphometry--not quite there yet. *NeuroImage*, **2011**, 56, 1164-70	7.9	71
49	Unified segmentation based correction of R1 brain maps for RF transmit field inhomogeneities (UNICORT). *NeuroImage*, **2011**, 54, 2116-24	7.9	121
48	Increased putamen and callosal motor subregion in treatment-naïve boys with Tourette syndrome indicates changes in the bihemispheric motor network. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, **2011**, 52, 306-14	7.9	51
47	Basal cerebral blood volume during the poststimulation undershoot in BOLD MRI of the human brain. *Journal of Cerebral Blood Flow and Metabolism*, **2011**, 31, 82-9	7.3	14
46	Identification of signal bias in the variable flip angle method by linear display of the algebraic Ernst equation. *Magnetic Resonance in Medicine*, **2011**, 66, 669-77	4.4	24
45	Individual voxel-based subtype prediction can differentiate progressive supranuclear palsy from idiopathic Parkinson syndrome and healthy controls. *Human Brain Mapping*, **2011**, 32, 1905-15	5.9	103
44	Differentiation of typical and atypical Parkinson syndromes by quantitative MR imaging. *American Journal of Neuroradiology*, **2011**, 32, 2087-92	4.4	63

43	Exact algebraization of the signal equation of spoiled gradient echo MRI. *Physics in Medicine and Biology*, **2010**, 55, 4231-45	3.8	13
42	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, 230-4	4.4	22
41	In vivo proton MR spectroscopy findings specific for adenylosuccinate lyase deficiency. *NMR in Biomedicine*, **2010**, 23, 441-5	4.4	13
40	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. *Magnetic Resonance in Medicine*, **2010**, 64, 177-85	4.4	42
39	Optimization and validation of methods for mapping of the radiofrequency transmit field at 3T. *Magnetic Resonance in Medicine*, **2010**, 64, 229-38	4.4	109
38	Viewing the effective k-space coverage of MR images: phantom experiments with fast Fourier transform. *Magnetic Resonance Imaging*, **2010**, 28, 87-94	3.3	6
37	In vivo quantification of the bound pool T1 in human white matter using the binary spin-bath model of progressive magnetization transfer saturation. *Physics in Medicine and Biology*, **2009**, 54, N529-40	3.8	31
36	Untreated glioblastoma multiforme: increased myo-inositol and glutamine levels in the contralateral cerebral hemisphere at proton MR spectroscopy. *Radiology*, **2009**, 253, 805-12	20.5	56
35	Increased SNR and reduced distortions by averaging multiple gradient echo signals in 3D FLASH imaging of the human brain at 3T. *Journal of Magnetic Resonance Imaging*, **2009**, 29, 198-204	5.6	68
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. *Journal of Magnetic Resonance Imaging*, **2009**, 29, 1285-92	5.6	45
33	No brain structure abnormalities in boys with Tourette's syndrome: a voxel-based morphometry study. *Movement Disorders*, **2009**, 24, 2398-403	7	27
32	Serial proton MR spectroscopy and diffusion tensor imaging in infantile Baló's concentric sclerosis. *Neuroradiology*, **2009**, 51, 113-21	3.2	18
31	Improved segmentation of deep brain grey matter structures using magnetization transfer (MT) parameter maps. *NeuroImage*, **2009**, 47, 194-8	7.9	143
30	The principles of quantification applied to in vivo proton MR spectroscopy. *European Journal of Radiology*, **2008**, 67, 218-229	4.7	45
29	Cerebral involvement in axonal Charcot-Marie-Tooth neuropathy caused by mitofusin2 mutations. *Journal of Neurology*, **2008**, 255, 1049-58	5.5	58
28	Quantitative FLASH MRI at 3T using a rational approximation of the Ernst equation. *Magnetic Resonance in Medicine*, **2008**, 59, 667-72	4.4	136
27	Rapid radiofrequency field mapping in vivo using single-shot STEAM MRI. *Magnetic Resonance in Medicine*, **2008**, 60, 739-43	4.4	36
26	High-resolution maps of magnetization transfer with inherent correction for RF inhomogeneity and T1 relaxation obtained from 3D FLASH MRI. *Magnetic Resonance in Medicine*, **2008**, 60, 1396-407	4.4	177

25	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, 1093-4	4.4	43
24	Cerebral metabolic and structural alterations in hereditary spastic paraplegia with thin corpus callosum assessed by MRS and DTI. *Neuroradiology*, **2006**, 48, 893-8	3.2	31
23	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	0.6	7
22	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, 790-5	5.6	17
21	Increased thalamus levels of glutamate and glutamine (Glx) in patients with idiopathic generalised epilepsy. *Journal of Neurology, Neurosurgery and Psychiatry*, **2006**, 77, 489-94	5.5	72
20	Simultaneous measurement of saturation and relaxation in human brain by repetitive magnetization transfer pulses. *NMR in Biomedicine*, **2005**, 18, 44-50	4.4	15
19	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, 723-31	3.3	7
18	Diffusion characteristics of large molecules assessed by proton MRS on a whole-body MR system. *Magnetic Resonance Imaging*, **2004**, 22, 39-46	3.3	40
17	Pulsed saturation of the standard two-pool model for magnetization transfer. Part I: The steady state. *Concepts in Magnetic Resonance*, **2004**, 21A, 37-49		13
16	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		8
15	MRS shows syndrome differentiated metabolite changes in human-generalized epilepsies. *NeuroImage*, **2004**, 21, 163-72	7.9	99
14	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, 478-85	8.7	25
13	T2-based segmentation of periventricular paragraph sign volumes for quantification of proton magnetic paragraph sign resonance spectra of multiple sclerosis lesions. *Magnetic Resonance Materials in Physics, Biology, and Medicine*, **2003**, 16, 10-6	2.8	11
12	Quantification of magnetization transfer by sampling the transient signal using MT-prepared single-shot EPI. *Concepts in Magnetic Resonance*, **2003**, 19A, 149-152		6
11	Comparison of longitudinal metabolite relaxation times in different regions of the human brain at 1.5 and 3 Tesla. *Magnetic Resonance in Medicine*, **2003**, 50, 1296-301	4.4	170
10	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, 803-11	3.3	11
9	Volume correction for edema in single-volume proton MR spectroscopy of contrast-enhancing multiple sclerosis lesions. *Magnetic Resonance in Medicine*, **2001**, 46, 256-63	4.4	54
8	Restoration of motion-related signal loss and line-shape deterioration of proton MR spectra using the residual water as intrinsic reference. *Magnetic Resonance in Medicine*, **2001**, 46, 395-400	4.4	55

7	Regression analysis of metabolite concentrations estimated from localized proton MR spectra of active and chronic multiple sclerosis lesions. *Magnetic Resonance in Medicine*, **2000**, 43, 102-10	4.4	39
6	MR spectroscopy shows reduced frontal lobe concentrations of N-acetyl aspartate in patients with juvenile myoclonic epilepsy. *Epilepsia*, **2000**, 41, 290-6	6.4	136
5	Analysis of 1.5 Tesla proton MR spectra of human brain using LCModel and an imported basis set. *Magnetic Resonance Imaging*, **1999**, 17, 1211-8	3.3	32
4	Metabolic alterations in brain autopsies: proton NMR identification of free glycerol. *NMR in Biomedicine*, **1996**, 9, 121-4	4.4	29
3	Localized proton magnetic resonance spectroscopy of a cerebellar tumor in a two-year-old child. *Childs Nervous System*, **1996**, 12, 626-9	1.7	6
2	Localized proton magnetic resonance spectroscopy of cerebral abnormalities in children with carbohydrate-deficient glycoprotein syndrome. *Acta Paediatrica, International Journal of Paediatrics* , **1995**, 84, 781-6	3.1	23
1	Identification of Scyllo-inositol in proton NMR spectra of human brain in vivo. *NMR in Biomedicine*, **1993**, 6, 105-9	4.4	84