

Gunther Helms

List of Publications by Year in descending order

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Version: 2024-02-01

79
papers

4,572
citations

87888

38
h-index

110387

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. | 3.0 | 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. | 4.2 | 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. | 3.1 | 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. | 3.0 | 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. | 3.0 | 194 |
| 6 | Unified segmentation based correction of R_1 brain maps for RF transmit field inhomogeneities (UNICORT). <i>NeuroImage</i> , 2011, 54, 2116-2124. | 4.2 | 168 |
| 7 | Improved segmentation of deep brain grey matter structures using magnetization transfer (MT) parameter maps. <i>NeuroImage</i> , 2009, 47, 194-198. | 4.2 | 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. | 3.0 | 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. | 5.1 | 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. | 3.6 | 122 |
| 11 | MRS shows syndrome differentiated metabolite changes in human-generalized epilepsies. <i>NeuroImage</i> , 2004, 21, 163-172. | 4.2 | 110 |
| 12 | New tissue priors for improved automated classification of subcortical brain structures on MRI. <i>NeuroImage</i> , 2016, 130, 157-166. | 4.2 | 104 |
| 13 | Multi-site voxel-based morphometry " Not quite there yet. <i>NeuroImage</i> , 2011, 56, 1164-1170. | 4.2 | 94 |
| 14 | Identification of scyllo-inositol in proton NMR spectra of human brain in vivo. <i>NMR in Biomedicine</i> , 1993, 6, 105-109. | 2.8 | 90 |
| 15 | A general linear relaxometry model of R_1 using imaging data. <i>Magnetic Resonance in Medicine</i> , 2015, 73, 1309-1314. | 3.0 | 90 |
| 16 | Reproducibility of the Structural Brain Connectome Derived from Diffusion Tensor Imaging. <i>PLoS ONE</i> , 2015, 10, e0135247. | 2.5 | 89 |
| 17 | Neurobiological origin of spurious brain morphological changes: A quantitative MRI study. <i>Human Brain Mapping</i> , 2016, 37, 1801-1815. | 3.6 | 87 |
| 18 | Brain tissue properties differentiate between motor and limbic basal ganglia circuits. <i>Human Brain Mapping</i> , 2014, 35, 5083-5092. | 3.6 | 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. | 3.4 | 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. | 1.9 | 80 |
| 21 | Differentiation of Typical and Atypical Parkinson Syndromes by Quantitative MR Imaging. <i>American Journal of Neuroradiology</i> , 2011, 32, 2087-2092. | 2.4 | 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. | 3.6 | 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. | 7.3 | 68 |
| 24 | Disentangling in vivo the effects of iron content and atrophy on the ageing human brain. <i>NeuroImage</i> , 2014, 103, 280-289. | 4.2 | 68 |
| 25 | Cerebral involvement in axonal Charcot-Marie-Tooth neuropathy caused by mitofusin2 mutations. <i>Journal of Neurology</i> , 2008, 255, 1049-58. | 3.6 | 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. | 3.0 | 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. | 3.0 | 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. | 3.0 | 62 |
| 29 | Idiopathic-generalized epilepsy shows profound white matter diffusion-tensor imaging alterations. <i>Human Brain Mapping</i> , 2014, 35, 3332-3342. | 3.6 | 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. | 5.2 | 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. | 3.6 | 59 |
| 32 | Multiparametric brainstem segmentation using a modified multivariate mixture of Gaussians. <i>NeuroImage: Clinical</i> , 2013, 2, 684-694. | 2.7 | 58 |
| 33 | The principles of quantification applied to in vivo proton MR spectroscopy. <i>European Journal of Radiology</i> , 2008, 67, 218-229. | 2.6 | 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. | 3.4 | 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. | 3.0 | 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. | 1.8 | 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. | 2.4 | 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. | 3.0 | 41 |
| 39 | Rapid radiofrequency field mapping in vivo using single-shot STEAM MRI. Magnetic Resonance in Medicine, 2008, 60, 739-743. | 3.0 | 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. | 1.8 | 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. | 2.2 | 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. | 6.4 | 31 |
| 44 | No brain structure abnormalities in boys with Tourette's syndrome: A voxel-based morphometry study. Movement Disorders, 2009, 24, 2398-2403. | 3.9 | 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. | 3.0 | 31 |
| 46 | Increased growth of colorectal liver metastasis following partial hepatectomy. Clinical and Experimental Metastasis, 2013, 30, 681-693. | 3.3 | 27 |
| 47 | Segmentation of human brain using structural MRI. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2016, 29, 111-124. | 2.0 | 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. | 3.0 | 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. | 3.4 | 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. | 1.5 | 24 |
| 51 | Exact algebraization of the signal equation of spoiled gradient echo MRI. Physics in Medicine and Biology, 2010, 55, 4231-4245. | 3.0 | 23 |
| 52 | Assessment of myelination in hypomyelinating disorders by quantitative MRI. Journal of Magnetic Resonance Imaging, 2012, 36, 1329-1338. | 3.4 | 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. | 2.8 | 20 |
| 54 | Serial proton MR spectroscopy and diffusion tensor imaging in infantile Balo's concentric sclerosis. Neuroradiology, 2009, 51, 113-121. | 2.2 | 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. | 2.5 | 19 |
| 56 | Simultaneous measurement of saturation and relaxation in human brain by repetitive magnetization transfer pulses. NMR in Biomedicine, 2005, 18, 44-50. | 2.8 | 18 |
| 57 | A New Targeted Model of Experimental Autoimmune Encephalomyelitis in the Common Marmoset. Brain Pathology, 2016, 26, 452-464. | 4.1 | 18 |
| 58 | <i>In vivo</i> proton MR spectroscopy findings specific for adenylosuccinate lyase deficiency. NMR in Biomedicine, 2010, 23, 441-445. | 2.8 | 16 |
| 59 | Structural and quantitative neuroimaging of the common marmoset monkey using a clinical MRI system. Journal of Neuroscience Methods, 2013, 215, 121-131. | 2.5 | 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. | 4.3 | 14 |
| 62 | Reducing bias in dual flip angle T ₁ mapping in human brain at 7T. Magnetic Resonance in Medicine, 2020, 84, 1347-1358. | 3.0 | 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. | 1.8 | 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. | 2.0 | 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. | 1.5 | 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. | 1.8 | 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. | 0.5 | 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. | 2.5 | 8 |
| 70 | Viewing the effective k-space coverage of MR images: phantom experiments with fast Fourier transform. Magnetic Resonance Imaging, 2010, 28, 87-94. | 1.8 | 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. | 2.8 | 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. | 1.1 | 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. | 3.0 | 5 |
| 75 | Pharmacokinetics of the MRI contrast agent gadobutrol in common marmoset monkeys (<i>Callithrix</i>). <i>Magnetic Resonance in Medicine</i> , 2014, 75, 1078-1084. | 0.6 | 1 |
| 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. | 2.8 | 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. | 3.0 | 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. | 1.7 | 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. | 1.8 | 0 |