Keith Thulborn

List of Publications by Year
in descending order

94 papers	8,229 citations	70961 41 h-index	49773 87 g-index
96 all docs	96 docs citations	96 times ranked	6632 citing authors

#	Article	IF	Citations
1	Brain Activation Modulated by Sentence Comprehension. Science, 1996, 274, 114-116.	6.0	1,153
2	Oxygenation dependence of the transverse relaxation time of water protons in whole blood at high field. Biochimica Et Biophysica Acta - General Subjects, 1982, 714, 265-270.	1.1	949
3	Maturation of Widely Distributed Brain Function Subserves Cognitive Development. NeuroImage, 2001, 13, 786-793.	2.1	701
4	Dorsal cortical regions subserving visually guided saccades in humans: an fMRI study. Cerebral Cortex, 1998, 8, 40-47.	1.6	332
5	Graded Functional Activation in the Visuospatial System with the Amount of Task Demand. Journal of Cognitive Neuroscience, 1999, 11, 9-24.	1.1	282
6	Fast three dimensional sodium imaging. Magnetic Resonance in Medicine, 1997, 37, 706-715.	1.9	241
7	Cortical networks subserving pursuit and saccadic eye movements in humans: An FMRI study. , 1999, 8, 209-225.		239
8	Properties and the locations of a set of fluorescent probes sensitive to the fluidity gradient of the lipid bilayer. Biochimica Et Biophysica Acta - Biomembranes, 1978, 511, 125-140.	1.4	233
9	Interdependence of Nonoverlapping Cortical Systems in Dual Cognitive Tasks. NeuroImage, 2001, 14, 417-426.	2.1	182
10	Time Course of fMRI-Activation in Language and Spatial Networks during Sentence Comprehension. NeuroImage, 1999, 10, 216-224.	2.1	178
11	Neural Basis for the Processes That Underlie Visually Guided and Internally Guided Force Control in Humans. Journal of Neurophysiology, 2003, 90, 3330-3340.	0.9	177
12	Pursuit and Saccadic Eye Movement Subregions in Human Frontal Eye Field: A High-resolution fMRI Investigation. Cerebral Cortex, 2002, 12, 107-115.	1.6	174
13	Magnetic Resonance Imaging of Children Without Sedation: Preparation With Simulation. Journal of the American Academy of Child and Adolescent Psychiatry, 1997, 36, 853-859.	0.3	159
14	Quantitative tissue sodium concentration mapping of the growth of focal cerebral tumors with sodium magnetic resonance imaging. Magnetic Resonance in Medicine, 1999, 41, 351-359.	1.9	116
15	Measurement of regional blood oxygenation and cerebral hemodynamics. Magnetic Resonance in Medicine, 1993, 30, 715-723.	1.9	112
16	The use of n-(9-anthroyloxy) fatty acids to determine fluidity and polarity gradients in phospholipid bilayers. Biochimica Et Biophysica Acta - Biomembranes, 1979, 558, 166-178.	1.4	111
17	Functional organization of activation patterns in children: Whole brain fMRI imaging during three different cognitive tasks. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 1999, 23, 669-682.	2.5	110
18	Developmental and Lesion Effects in Brain Activation During Sentence Comprehension and Mental Rotation. Developmental Neuropsychology, 2000, 18, 139-169.	1.0	105

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19	Feasibility of mapping the tissue mass corrected bioscale of cerebral metabolic rate of oxygen consumption using 17-oxygen and 23-sodium MR imaging in a human brain at 9.4T. NeuroImage, 2010, 51, 723-733.	2.1	99
20	Sodium MR Imaging of Acute and Subacute Stroke for Assessment of Tissue Viability. Neuroimaging Clinics of North America, 2005, 15, 639-653.	0.5	97
21	Quantitative sodium imaging with a flexible twisted projection pulse sequence. Magnetic Resonance in Medicine, 2010, 63, 1583-1593.	1.9	95
22	Serial [18F]Fluorodeoxyglucose Positron Emission Tomography after Human Neuronal Implantation for Stroke. Neurosurgery, 2001, 49, 586-592.	0.6	93
23	Quantitative tissue sodium concentration mapping of normal rat brain. Magnetic Resonance in Medicine, 1996, 36, 83-89.	1.9	89
24	Safety of human MRI at static fields above the FDA 8T guideline: Sodium imaging at 9.4T does not affect vital signs or cognitive ability. Journal of Magnetic Resonance Imaging, 2007, 26, 1222-1227.	1.9	87
25	Spectrally weighted twisted projection imaging: ReducingT2 signal attenuation effects in fast three-dimensional sodium imaging. Magnetic Resonance in Medicine, 1997, 38, 1022-1028.	1.9	83
26	Effect of Age and Vascular Anatomy on Blood Flow in Major Cerebral Vessels. Journal of Cerebral Blood Flow and Metabolism, 2015, 35, 312-318.	2.4	83
27	Comparison of fluorescence energy transfer and quenching methods to establish the position and orientation of components within the transverse plane of the lipid bilayer. Application to the gramicidin A-bilayer interaction. Biochemistry, 1979, 18, 3525-3532.	1.2	79
28	High-resolution echo-planar fMRI of human visual cortex at 3.0 tesla. , 1997, 10, 183-190.		78
29	Retinotopic mapping of lateral geniculate nucleus in humans using functional magnetic resonance imaging. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 2430-2434.	3.3	78
30	Dual-frequency, dual-quadrature, birdcage RF coil design with identical b1 pattern for sodium and proton imaging of the human brain at 1.5 T. Magnetic Resonance in Medicine, 1997, 38, 717-725.	1.9	77
31	Clinical Rationale for Very-High-Field (3.0 Tesla) Functional Magnetic Resonance Imaging. Topics in Magnetic Resonance Imaging, 1999, 10, 37-50.	0.7	75
32	Subthalamic nucleus and internal globus pallidus scale with the rate of change of force production in humans. NeuroImage, 2004, 23, 175-186.	2.1	75
33	Combined Direct and Indirect Bypass for Moyamoya. Neurosurgery, 2013, 73, 962-968.	0.6	72
34	Stimulusâ€“Response Incompatibility Activates Cortex Proximate to Three Eye Fields. NeuroImage, 2001, 13, 794-800.	2.1	69
35	Quantitativein vivo tissue sodium concentration maps: The effects of biexponential relaxation. Magnetic Resonance in Medicine, 1994, 32, 219-223.	1.9	67
36	Investigating the neurobiological basis of cognitive rehabilitation therapy with fMRI. Brain Injury, 2004, 18, 957-974.	0.6	63

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37	Quantitative Sodium MR Imaging and Sodium Bioscales for the Management of Brain Tumors. Neuroimaging Clinics of North America, 2009, 19, 615-624.	0.5	63
38	Characterization and correction of system delays and eddy currents for MR imaging with ultrashort echoâ€time and timeâ€varying gradients. Magnetic Resonance in Medicine, 2009, 62, 532-537.	1.9	53
39	A microviscosity barrier in the lipid bilayer due to the presence of phospholipids containing unsaturated acyl chains. Biochemical and Biophysical Research Communications, 1978, 81, 42-49.	1.0	51
40	In Vivo Evaluation of Quantitative MR Angiography in a Canine Carotid Artery Stenosis Model. American Journal of Neuroradiology, 2011, 32, 1552-1559.	1.2	51
41	Absolute molar concentrations by NMR in inhomogeneous B1. A scheme for analysis of in vivo metabolites. Journal of Magnetic Resonance, 1983, 55, 357-371.	0.5	48
42	Detection of Intracranial In-Stent Restenosis Using Quantitative Magnetic Resonance Angiography. Stroke, 2010, 41, 2534-2538.	1.0	47
43	Perturbations to lipid bilayers by spectroscopic probes as determined by dielectric measurements. Biochimica Et Biophysica Acta - Biomembranes, 1980, 602, 299-308.	1.4	41
44	Resolution of partition coefficients in the transverse plane of the lipid bilayer. Chemistry and Physics of Lipids, 1981, 29, 23-36.	1.5	41
45	Clinical fMRI: Implementation and Experience. NeuroImage, 1996, 4, S101-S107.	2.1	40
46	Vital signs and cognitive function are not affected by 23â€sodium and 17â€oxygen magnetic resonance imaging of the human brain at 9.4 T. Journal of Magnetic Resonance Imaging, 2010, 32, 82-87.	1.9	40
47	Vertebrobasilar Flow Evaluation and Risk of Transient Ischaemic Attack and Stroke Study (Veritas): Rationale and Design. International Journal of Stroke, 2010, 5, 499-505.	2.9	39
48	Survival and early differentiation of human neural stem cells transplanted in a nonhuman primate model of stroke. Journal of Neurosurgery, 2006, 105, 96-102.	0.9	36
49	Early Decay of Pain-related Cerebral Activation in Functional Magnetic Resonance Imaging. Anesthesiology, 2002, 96, 35-44.	1.3	33
50	Experimentally verified, theoretical design of dual-tuned, low-pass birdcage radiofrequency resonators for magnetic resonance imaging and magnetic resonance spectroscopy of human brain at 3.0 Tesla. Magnetic Resonance in Medicine, 1999, 41, 268-275.	1.9	32
51	Clinically constrained optimization of flexTPI acquisition parameters for the tissue sodium concentration bioscale. Magnetic Resonance in Medicine, 2011, 66, 1089-1099.	1.9	31
52	Changing patterns of brain activation during category learning revealed by functional MRI. Cognitive Brain Research, 2004, 22, 84-93.	3.3	29
53	PCr/ATP ratio mapping of the human head by simultaneously imaging of multiple spectral peaks with interleaved excitations and flexible twisted projection imaging readout trajectories at 9.4 T. Magnetic Resonance in Medicine, 2013, 69, 538-544.	1.9	29
54	Estimation and classification of fMRI hemodynamic response patterns. NeuroImage, 2004, 22, 804-814.	2.1	28

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55	Sixth Cranial Nerve Palsy Caused by Compression From a Dolichoectatic Vertebral Artery. Journal of Neuro-Ophthalmology, 2005, 25, 134-135.	0.4	26
56	The effects of cholesterol on the time-resolved emission anisotropy of 12-(9-anthroyloxy)stearic acid in dipalmitoylphosphatidylcholine bilayers. Biochimica Et Biophysica Acta - Biomembranes, 1982, 693, 246-252.	1.4	23
57	Correction of B1 inhomogeneities using echo-planar imaging of water. Magnetic Resonance in Medicine, 1998, 39, 369-375.	1.9	22
58	An fMRI Study of Saccadic and Smooth-Pursuit Eye Movement Control in Patients with Age-Related Macular Degeneration. , 2008, 49, 1728.		20
59	Feasibility of 39-potassium MR imaging of a human brain at 9.4 Tesla. Magnetic Resonance in Medicine, 2014, 71, 1819-1825.	1.9	20
60	31P-NMR saturation transfer study of the in vivo kinetics of arginine kinase in Carcinus crab leg muscle. Biochimica Et Biophysica Acta - Molecular Cell Research, 1985, 845, 343-348.	1.9	19
61	13C NMR studies on fluorescent probes: 13C chemical shifts and longitudinal relaxation times of n-hydroxy-fatty (n=2,6,9,12) acids and n-(9-anthroyloxy)-stearic (n=6,12) acids. Chemistry and Physics of Lipids, 1979, 24, 11-16.	1.5	18
62	Specified-resolution wavelet analysis of activation patterns from BOLD contrast fMRI. IEEE Transactions on Medical Imaging, 2001, 20, 704-714.	5.4	18
63	Correlations of cortical activation and behavior during the application of newly learned categories. Cognitive Brain Research, 2005, 25, 33-47.	3.3	18
64	Prototype-distortion category learning: A two-phase learning process across a distributed network. Brain and Cognition, 2006, 60, 233-243.	0.8	18
65	Dural venous sinus thrombosis in a patient with sickle cell disease: Case report and literature review. American Journal of Hematology, 2006, 81, 290-293.	2.0	18
66	Three-dimensional projection imaging with half the number of projections. Magnetic Resonance in Medicine, 1997, 37, 470-477.	1.9	17
67	Magnetic resonance imaging in the diagnosis of subretinal cysticercosis. American Journal of Ophthalmology, 2002, 134, 931-932.	1.7	16
68	Phosphorus-31 nuclear magnetic resonance studies of pig adrenal glands. Neuroscience, 1984, 11, 281-286.	1.1	15
69	Event-related fMRI of category learning: Differences in classification and feedback networks. Brain and Cognition, 2006, 60, 244-252.	0.8	15
70	Changes in fMRI Following Cognitive Rehabilitation in Severe Traumatic Brain Injury: A Case Study.. Rehabilitation Psychology, 2004, 49, 262-267.	0.7	14
71	My starting point: The discovery of an NMR method for measuring blood oxygenation using the transverse relaxation time of blood water. NeuroImage, 2012, 62, 589-593.	2.1	14
72	Leghaemoglobin from Trifolium subterraneum Purification and characterization. Biochimica Et Biophysica Acta (BBA) - Protein Structure, 1979, 578, 476-483.	1.7	13

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73	Functional, physiological, and metabolic toolbox for clinical magnetic resonance imaging: Integration of acquisition and analysis strategies. International Journal of Imaging Systems and Technology, 1997, 8, 572-581.	2.7	13
74	An Integrated Head Immobilization System and High-Performance RF Coil for fMRI of Visual Paradigms at 1.5 T. Journal of Magnetic Resonance, 1999, 139, 26-34.	1.2	13
75	A BOLD move for fMRI. Nature Medicine, 1998, 4, 155-156.	15.2	12
76	Leghemoglobins: Immunochemistry and phylogenetic relationships. FEBS Letters, 1977, 84, 244-246.	1.3	11
77	Why Neuroradiologists Should Consider Very-High-Field Magnets for Clinical Applications of Functional Magnetic Resonance Imaging. Topics in Magnetic Resonance Imaging, 1999, 10, 1-2.	0.7	10
78	Blind Estimation for Localized Low Contrast-to-Noise Ratio BOLD Signals. IEEE Journal on Selected Topics in Signal Processing, 2008, 2, 879-890.	7.3	10
79	Investigating the consistency of brain activation using individual trial analysis of high-resolution fMRI in the human primary visual cortex. NeuroImage, 2009, 47, 1417-1424.	2.1	10
80	Impact of gradient timing error on the tissue sodium concentration bioscale measured using flexible twisted projection imaging. Journal of Magnetic Resonance, 2011, 213, 176-181.	1.2	10
81	Preserving the accuracy and resolution of the sodium bioscale from quantitative sodium MRI during intrasubject alignment across longitudinal studies. Magnetic Resonance in Medicine, 2012, 68, 751-761.	1.9	10
82	MRI in the Management of Cerebrovascular Disease to Prevent Stroke. Neurologic Clinics, 2008, 26, 897-921.	0.8	9
83	Proton imaging for in vivo blood flow and oxygen consumption measurements. Journal of Magnetic Resonance, 1981, 45, 188-191.	0.5	8
84	The Cross-Modal Interaction Between Pain-Related and Saccade-Related Cerebral Activation: A Preliminary Study by Event-Related Functional Magnetic Resonance Imaging. Anesthesia and Analgesia, 2005, 101, 449-456.	1.1	7
85	A current perspective of the status of understanding BOLD imaging and its use in studying brain function: a summary of the workshop at the University of North Carolina in Chapel Hill, 26-28 October, 2000. NMR in Biomedicine, 2001, 14, 384-388.	1.6	6
86	Reproducibility of Activation Maps for Longitudinal Studies of Visual Function by Functional Magnetic Resonance Imaging. , 2012, 53, 6153.		6
87	Software for efficient visualization and analysis of multiple, large, multi-dimensional data sets from magnetic resonance imaging. Computerized Medical Imaging and Graphics, 2002, 26, 73-89.	3.5	5
88	Comparison of Blood Oxygenation Levelâ€“Dependent fMRI and Provocative DSC Perfusion MR Imaging for Monitoring Cerebrovascular Reserve in Intracranial Chronic Cerebrovascular Disease. American Journal of Neuroradiology, 2018, 39, 448-453.	1.2	5
89	Simultaneous in vivo measurement of oxygen utilization and high-energy phosphate metabolism in rabbit skeletal muscle by multinuclear 1H and 31P NMR. Journal of Magnetic Resonance, 1981, 45, 362-366.	0.5	4
90	A simple method of flow measurement by pulsed NMR. Journal of Magnetic Resonance, 1981, 42, 488-490.	0.5	4

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91	Gender differences in cell volume fraction (CVF): a structural parameter reflecting the energy efficiency of maintaining the resting membrane potential. NMR in Biomedicine, 2022, , e4693.	1.6	3
92	Magnetic Resonance Imaging of Diffuse Cerebral Vasculitis AssociatedWith Acute Retinal Necrosis. JAMA Ophthalmology, 2004, 122, 1719.	2.6	1
93	Rapid computation of sodium bioscales using gpuâ€accelerated image reconstruction. International Journal of Imaging Systems and Technology, 2013, 23, 29-35.	2.7	1
94	PHOSPHOROUS NMR MEASUREMENT OF ENERGY METABOLISM IN EXPERIMENTAL STROKE IN A MONKEY. Journal of Computer Assisted Tomography, 1983, 7, 185.	0.5	0