

Keith Thulborn

List of Publications by Year in descending order

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94
papers

8,229
citations

66343

42
h-index

46799

89
g-index

96
all docs

96
docs citations

96
times ranked

6632
citing authors

#	ARTICLE	IF	CITATIONS
1	Brain Activation Modulated by Sentence Comprehension. <i>Science</i> , 1996, 274, 114-116.	12.6	1,153
2	Oxygenation dependence of the transverse relaxation time of water protons in whole blood at high field. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 1982, 714, 265-270.	2.4	949
3	Maturation of Widely Distributed Brain Function Subserves Cognitive Development. <i>NeuroImage</i> , 2001, 13, 786-793.	4.2	701
4	Dorsal cortical regions subserving visually guided saccades in humans: an fMRI study. <i>Cerebral Cortex</i> , 1998, 8, 40-47.	2.9	332
5	Graded Functional Activation in the Visuospatial System with the Amount of Task Demand. <i>Journal of Cognitive Neuroscience</i> , 1999, 11, 9-24.	2.3	282
6	Fast three dimensional sodium imaging. <i>Magnetic Resonance in Medicine</i> , 1997, 37, 706-715.	3.0	241
7	Cortical networks subserving pursuit and saccadic eye movements in humans: An FMRI study. <i>Human Brain Mapping</i> , 1999, 8, 209-225.	3.6	239
8	Properties and the locations of a set of fluorescent probes sensitive to the fluidity gradient of the lipid bilayer. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1978, 511, 125-140.	2.6	233
9	Interdependence of Nonoverlapping Cortical Systems in Dual Cognitive Tasks. <i>NeuroImage</i> , 2001, 14, 417-426.	4.2	182
10	Time Course of fMRI-Activation in Language and Spatial Networks during Sentence Comprehension. <i>NeuroImage</i> , 1999, 10, 216-224.	4.2	178
11	Neural Basis for the Processes That Underlie Visually Guided and Internally Guided Force Control in Humans. <i>Journal of Neurophysiology</i> , 2003, 90, 3330-3340.	1.8	177
12	Pursuit and Saccadic Eye Movement Subregions in Human Frontal Eye Field: A High-resolution fMRI Investigation. <i>Cerebral Cortex</i> , 2002, 12, 107-115.	2.9	174
13	Magnetic Resonance Imaging of Children Without Sedation: Preparation With Simulation. <i>Journal of the American Academy of Child and Adolescent Psychiatry</i> , 1997, 36, 853-859.	0.5	159
14	Quantitative tissue sodium concentration mapping of the growth of focal cerebral tumors with sodium magnetic resonance imaging. <i>Magnetic Resonance in Medicine</i> , 1999, 41, 351-359.	3.0	116
15	Measurement of regional blood oxygenation and cerebral hemodynamics. <i>Magnetic Resonance in Medicine</i> , 1993, 30, 715-723.	3.0	112
16	The use of n-(9-anthroyloxy) fatty acids to determine fluidity and polarity gradients in phospholipid bilayers. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1979, 558, 166-178.	2.6	111
17	Functional organization of activation patterns in children: Whole brain fMRI imaging during three different cognitive tasks. <i>Progress in Neuro-Psychopharmacology and Biological Psychiatry</i> , 1999, 23, 669-682.	4.8	110
18	Developmental and Lesion Effects in Brain Activation During Sentence Comprehension and Mental Rotation. <i>Developmental Neuropsychology</i> , 2000, 18, 139-169.	1.4	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. <i>NeuroImage</i> , 2010, 51, 723-733.	4.2	99
20	Sodium MR Imaging of Acute and Subacute Stroke for Assessment of Tissue Viability. <i>Neuroimaging Clinics of North America</i> , 2005, 15, 639-653.	1.0	97
21	Quantitative sodium imaging with a flexible twisted projection pulse sequence. <i>Magnetic Resonance in Medicine</i> , 2010, 63, 1583-1593.	3.0	95
22	Serial [18F]Fluorodeoxyglucose Positron Emission Tomography after Human Neuronal Implantation for Stroke. <i>Neurosurgery</i> , 2001, 49, 586-592.	1.1	93
23	Quantitative tissue sodium concentration mapping of normal rat brain. <i>Magnetic Resonance in Medicine</i> , 1996, 36, 83-89.	3.0	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. <i>Journal of Magnetic Resonance Imaging</i> , 2007, 26, 1222-1227.	3.4	87
25	Spectrally weighted twisted projection imaging: Reducing T2 signal attenuation effects in fast three-dimensional sodium imaging. <i>Magnetic Resonance in Medicine</i> , 1997, 38, 1022-1028.	3.0	83
26	Effect of Age and Vascular Anatomy on Blood Flow in Major Cerebral Vessels. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2015, 35, 312-318.	4.3	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. <i>Biochemistry</i> , 1979, 18, 3525-3532.	2.5	79
28	High-resolution echo-planar fMRI of human visual cortex at 3.0 tesla. <i>NMR in Biomedicine</i> , 1997, 10, 183-190.	2.8	78
29	Retinotopic mapping of lateral geniculate nucleus in humans using functional magnetic resonance imaging. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999, 96, 2430-2434.	7.1	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. <i>Magnetic Resonance in Medicine</i> , 1997, 38, 717-725.	3.0	77
31	Clinical Rationale for Very-High-Field (3.0 Tesla) Functional Magnetic Resonance Imaging. <i>Topics in Magnetic Resonance Imaging</i> , 1999, 10, 37-50.	1.2	75
32	Subthalamic nucleus and internal globus pallidus scale with the rate of change of force production in humans. <i>NeuroImage</i> , 2004, 23, 175-186.	4.2	75
33	Combined Direct and Indirect Bypass for Moyamoya. <i>Neurosurgery</i> , 2013, 73, 962-968.	1.1	72
34	Stimulus-Response Incompatibility Activates Cortex Proximate to Three Eye Fields. <i>NeuroImage</i> , 2001, 13, 794-800.	4.2	69
35	Quantitative in vivo tissue sodium concentration maps: The effects of biexponential relaxation. <i>Magnetic Resonance in Medicine</i> , 1994, 32, 219-223.	3.0	67
36	Investigating the neurobiological basis of cognitive rehabilitation therapy with fMRI. <i>Brain Injury</i> , 2004, 18, 957-974.	1.2	63

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37	Quantitative Sodium MR Imaging and Sodium Bioscales for the Management of Brain Tumors. <i>Neuroimaging Clinics of North America</i> , 2009, 19, 615-624.	1.0	63
38	Characterization and correction of system delays and eddy currents for MR imaging with ultrashort echo time and time-varying gradients. <i>Magnetic Resonance in Medicine</i> , 2009, 62, 532-537.	3.0	53
39	A microviscosity barrier in the lipid bilayer due to the presence of phospholipids containing unsaturated acyl chains. <i>Biochemical and Biophysical Research Communications</i> , 1978, 81, 42-49.	2.1	51
40	In Vivo Evaluation of Quantitative MR Angiography in a Canine Carotid Artery Stenosis Model. <i>American Journal of Neuroradiology</i> , 2011, 32, 1552-1559.	2.4	51
41	Absolute molar concentrations by NMR in inhomogeneous B1. A scheme for analysis of in vivo metabolites. <i>Journal of Magnetic Resonance</i> , 1983, 55, 357-371.	0.5	48
42	Detection of Intracranial In-Stent Restenosis Using Quantitative Magnetic Resonance Angiography. <i>Stroke</i> , 2010, 41, 2534-2538.	2.0	47
43	Perturbations to lipid bilayers by spectroscopic probes as determined by dielectric measurements. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1980, 602, 299-308.	2.6	41
44	Resolution of partition coefficients in the transverse plane of the lipid bilayer. <i>Chemistry and Physics of Lipids</i> , 1981, 29, 23-36.	3.2	41
45	Clinical fMRI: Implementation and Experience. <i>NeuroImage</i> , 1996, 4, S101-S107.	4.2	40
46	Vital signs and cognitive function are not affected by ²³ Sodium and ¹⁷ Oxygen magnetic resonance imaging of the human brain at 9.4 T. <i>Journal of Magnetic Resonance Imaging</i> , 2010, 32, 82-87.	3.4	40
47	Vertebrobasilar Flow Evaluation and Risk of Transient Ischaemic Attack and Stroke Study (Veritas): Rationale and Design. <i>International Journal of Stroke</i> , 2010, 5, 499-505.	5.9	39
48	Survival and early differentiation of human neural stem cells transplanted in a nonhuman primate model of stroke. <i>Journal of Neurosurgery</i> , 2006, 105, 96-102.	1.6	36
49	Early Decay of Pain-related Cerebral Activation in Functional Magnetic Resonance Imaging. <i>Anesthesiology</i> , 2002, 96, 35-44.	2.5	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. <i>Magnetic Resonance in Medicine</i> , 1999, 41, 268-275.	3.0	32
51	Clinically constrained optimization of flexTPI acquisition parameters for the tissue sodium concentration bioscale. <i>Magnetic Resonance in Medicine</i> , 2011, 66, 1089-1099.	3.0	31
52	Changing patterns of brain activation during category learning revealed by functional MRI. <i>Cognitive Brain Research</i> , 2004, 22, 84-93.	3.0	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. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 538-544.	3.0	29
54	Estimation and classification of fMRI hemodynamic response patterns. <i>NeuroImage</i> , 2004, 22, 804-814.	4.2	28

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55	Sixth Cranial Nerve Palsy Caused by Compression From a Dolichoectatic Vertebral Artery. <i>Journal of Neuro-Ophthalmology</i> , 2005, 25, 134-135.	0.8	26
56	The effects of cholesterol on the time-resolved emission anisotropy of 12-(9-anthroyloxy)stearic acid in dipalmitoylphosphatidylcholine bilayers. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 1982, 693, 246-252.	2.6	23
57	Correction of B1 inhomogeneities using echo-planar imaging of water. <i>Magnetic Resonance in Medicine</i> , 1998, 39, 369-375.	3.0	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. <i>Magnetic Resonance in Medicine</i> , 2014, 71, 1819-1825.	3.0	20
60	³¹ P-NMR saturation transfer study of the in vivo kinetics of arginine kinase in <i>Carcinus</i> crab leg muscle. <i>Biochimica Et Biophysica Acta - Molecular Cell Research</i> , 1985, 845, 343-348.	4.1	19
61	¹³ C NMR studies on fluorescent probes: ¹³ C 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. <i>Chemistry and Physics of Lipids</i> , 1979, 24, 11-16.	3.2	18
62	Specified-resolution wavelet analysis of activation patterns from BOLD contrast fMRI. <i>IEEE Transactions on Medical Imaging</i> , 2001, 20, 704-714.	8.9	18
63	Correlations of cortical activation and behavior during the application of newly learned categories. <i>Cognitive Brain Research</i> , 2005, 25, 33-47.	3.0	18
64	Prototype-distortion category learning: A two-phase learning process across a distributed network. <i>Brain and Cognition</i> , 2006, 60, 233-243.	1.8	18
65	Dural venous sinus thrombosis in a patient with sickle cell disease: Case report and literature review. <i>American Journal of Hematology</i> , 2006, 81, 290-293.	4.1	18
66	Three-dimensional projection imaging with half the number of projections. <i>Magnetic Resonance in Medicine</i> , 1997, 37, 470-477.	3.0	17
67	Magnetic resonance imaging in the diagnosis of subretinal cysticercosis. <i>American Journal of Ophthalmology</i> , 2002, 134, 931-932.	3.3	16
68	Phosphorus-31 nuclear magnetic resonance studies of pig adrenal glands. <i>Neuroscience</i> , 1984, 11, 281-286.	2.3	15
69	Event-related fMRI of category learning: Differences in classification and feedback networks. <i>Brain and Cognition</i> , 2006, 60, 244-252.	1.8	15
70	Changes in fMRI Following Cognitive Rehabilitation in Severe Traumatic Brain Injury: A Case Study.. <i>Rehabilitation Psychology</i> , 2004, 49, 262-267.	1.3	14
71	My starting point: The discovery of an NMR method for measuring blood oxygenation using the transverse relaxation time of blood water. <i>NeuroImage</i> , 2012, 62, 589-593.	4.2	14
72	Leghaemoglobin from <i>Trifolium subterraneum</i> Purification and characterization. <i>Biochimica Et Biophysica Acta (BBA) - Protein Structure</i> , 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. <i>International Journal of Imaging Systems and Technology</i> , 1997, 8, 572-581.	4.1	13
74	An Integrated Head Immobilization System and High-Performance RF Coil for fMRI of Visual Paradigms at 1.5 T. <i>Journal of Magnetic Resonance</i> , 1999, 139, 26-34.	2.1	13
75	A BOLD move for fMRI. <i>Nature Medicine</i> , 1998, 4, 155-156.	30.7	12
76	Leghemoglobins: Immunochemistry and phylogenetic relationships. <i>FEBS Letters</i> , 1977, 84, 244-246.	2.8	11
77	Why Neuroradiologists Should Consider Very-High-Field Magnets for Clinical Applications of Functional Magnetic Resonance Imaging. <i>Topics in Magnetic Resonance Imaging</i> , 1999, 10, 1-2.	1.2	10
78	Blind Estimation for Localized Low Contrast-to-Noise Ratio BOLD Signals. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2008, 2, 879-890.	10.8	10
79	Investigating the consistency of brain activation using individual trial analysis of high-resolution fMRI in the human primary visual cortex. <i>NeuroImage</i> , 2009, 47, 1417-1424.	4.2	10
80	Impact of gradient timing error on the tissue sodium concentration bioscale measured using flexible twisted projection imaging. <i>Journal of Magnetic Resonance</i> , 2011, 213, 176-181.	2.1	10
81	Preserving the accuracy and resolution of the sodium bioscale from quantitative sodium MRI during intrasubject alignment across longitudinal studies. <i>Magnetic Resonance in Medicine</i> , 2012, 68, 751-761.	3.0	10
82	MRI in the Management of Cerebrovascular Disease to Prevent Stroke. <i>Neurologic Clinics</i> , 2008, 26, 897-921.	1.8	9
83	Proton imaging for in vivo blood flow and oxygen consumption measurements. <i>Journal of Magnetic Resonance</i> , 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. <i>Anesthesia and Analgesia</i> , 2005, 101, 449-456.	2.2	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. <i>NMR in Biomedicine</i> , 2001, 14, 384-388.	2.8	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. <i>Computerized Medical Imaging and Graphics</i> , 2002, 26, 73-89.	5.8	5
88	Comparison of Blood Oxygenation Level-Dependent fMRI and Provocative DSC Perfusion MR Imaging for Monitoring Cerebrovascular Reserve in Intracranial Chronic Cerebrovascular Disease. <i>American Journal of Neuroradiology</i> , 2018, 39, 448-453.	2.4	5
89	Simultaneous in vivo measurement of oxygen utilization and high-energy phosphate metabolism in rabbit skeletal muscle by multinuclear ¹ H and ³¹ P NMR. <i>Journal of Magnetic Resonance</i> , 1981, 45, 362-366.	0.5	4
90	A simple method of flow measurement by pulsed NMR. <i>Journal of Magnetic Resonance</i> , 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.	2.8	3
92	Magnetic Resonance Imaging of Diffuse Cerebral Vasculitis Associated With Acute Retinal Necrosis. JAMA Ophthalmology, 2004, 122, 1719.	2.4	1
93	Rapid computation of sodium bioscales using gpu-accelerated image reconstruction. International Journal of Imaging Systems and Technology, 2013, 23, 29-35.	4.1	1
94	PHOSPHOROUS NMR MEASUREMENT OF ENERGY METABOLISM IN EXPERIMENTAL STROKE IN A MONKEY. Journal of Computer Assisted Tomography, 1983, 7, 185.	0.9	0