

Martijn Froeling

List of Publications by Year in descending order

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113
papers

3,916
citations

186254

28
h-index

155644

55
g-index

121
all docs

121
docs citations

121
times ranked

5284
citing authors

#	ARTICLE	IF	CITATIONS
1	The challenge of mapping the human connectome based on diffusion tractography. <i>Nature Communications</i> , 2017, 8, 1349.	12.8	956
2	The importance of correcting for signal drift in diffusion MRI. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 285-299.	3.0	174
3	Activity-dependent spinal cord neuromodulation rapidly restores trunk and leg motor functions after complete paralysis. <i>Nature Medicine</i> , 2022, 28, 260-271.	30.7	174
4	RF coils: A practical guide for nonphysicists. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 48, 590-604.	3.4	137
5	Techniques and applications of skeletal muscle diffusion tensor imaging: A review. <i>Journal of Magnetic Resonance Imaging</i> , 2016, 43, 773-788.	3.4	135
6	Muscle Changes Detected with Diffusion-Tensor Imaging after Long-Distance Running. <i>Radiology</i> , 2015, 274, 548-562.	7.3	110
7	DTI of human skeletal muscle: the effects of diffusion encoding parameters, signal-to-noise ratio and T_2 on tensor indices and fiber tracts. <i>NMR in Biomedicine</i> , 2013, 26, 1339-1352.	2.8	106
8	Diffusion tensor MRI reveals the complex muscle architecture of the human forearm. <i>Journal of Magnetic Resonance Imaging</i> , 2012, 36, 237-248.	3.4	101
9	Evaluation of skeletal muscle DTI in patients with duchenne muscular dystrophy. <i>NMR in Biomedicine</i> , 2015, 28, 1589-1597.	2.8	93
10	Skeletal muscle diffusion tensor MRI fiber tracking: rationale, data acquisition and analysis methods, applications and future directions. <i>NMR in Biomedicine</i> , 2017, 30, e3563.	2.8	68
11	Investigating the non-linearity of the BOLD cerebrovascular reactivity response to targeted hypo/hypercapnia at 7T. <i>NeuroImage</i> , 2014, 98, 296-305.	4.2	67
12	the MASSIVE brain dataset: Multiple acquisitions for standardization of structural imaging validation and evaluation. <i>Magnetic Resonance in Medicine</i> , 2017, 77, 1797-1809.	3.0	65
13	Feasibility of diffusion tensor imaging (DTI) with fibre tractography of the normal female pelvic floor. <i>European Radiology</i> , 2011, 21, 1243-1249.	4.5	61
14	Consensus-based technical recommendations for clinical translation of renal diffusion-weighted MRI. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2020, 33, 177-195.	2.0	61
15	Architectural configuration and microstructural properties of the sacral plexus: A diffusion tensor MRI and fiber tractography study. <i>NeuroImage</i> , 2012, 62, 1792-1799.	4.2	59
16	Diagnostic accuracy of MRI and ultrasound in chronic immune-mediated neuropathies. <i>Neurology</i> , 2020, 94, e62-e74.	1.1	51
17	Multi-center evaluation of stability and reproducibility of quantitative MRI measures in healthy calf muscles. <i>NMR in Biomedicine</i> , 2019, 32, e4119.	2.8	50
18	Reproducibility of diffusion tensor imaging in human forearm muscles at 3.0 T in a clinical setting. <i>Magnetic Resonance in Medicine</i> , 2010, 64, 1182-1190.	3.0	49

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19	Intravoxel incoherent motion modeling in the kidneys: Comparison of mono-, bi-, and triexponential fit. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 46, 228-239.	3.4	48
20	Exploration of New Contrasts, Targets, and MR Imaging and Spectroscopy Techniques for Neuromuscular Disease – A Workshop Report of Working Group 3 of the Biomedicine and Molecular Biosciences COST Action BM1304 MYO-MRI. <i>Journal of Neuromuscular Diseases</i> , 2019, 6, 1-30.	2.6	46
21	Comparison of six fit algorithms for the intra-voxel incoherent motion model of diffusion-weighted magnetic resonance imaging data of pancreatic cancer patients. <i>PLoS ONE</i> , 2018, 13, e0194590.	2.5	44
22	Minimizing the Acquisition Time for Intravoxel Incoherent Motion Magnetic Resonance Imaging Acquisitions in the Liver and Pancreas. <i>Investigative Radiology</i> , 2016, 51, 211-220.	6.2	37
23	MRI shows thickening and altered diffusion in the median and ulnar nerves in multifocal motor neuropathy. <i>European Radiology</i> , 2017, 27, 2216-2224.	4.5	37
24	Multiparametric quantitative MRI assessment of thigh muscles in limb-girdle muscular dystrophy 2A and 2B. <i>Muscle and Nerve</i> , 2018, 58, 550-558.	2.2	37
25	Effects of perfusion on DTI and DKI estimates in the skeletal muscle. <i>Magnetic Resonance in Medicine</i> , 2017, 78, 233-246.	3.0	36
26	Evaluation of the 3D fractal dimension as a marker of structural brain complexity in multiple-acquisition MRI. <i>Human Brain Mapping</i> , 2019, 40, 3299-3320.	3.6	33
27	Endogenous assessment of chronic myocardial infarction with T1 ρ -mapping in patients. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2014, 16, 104.	3.3	32
28	Quantitative MRI of skeletal muscle in a cross-sectional cohort of patients with spinal muscular atrophy types 2 and 3. <i>NMR in Biomedicine</i> , 2020, 33, e4357.	2.8	31
29	Endogenous contrast MRI of cardiac fibrosis: Beyond late gadolinium enhancement. <i>Journal of Magnetic Resonance Imaging</i> , 2015, 41, 1181-1189.	3.4	30
30	Evaluation of the female pelvic floor in pelvic organ prolapse using 3.0-Tesla diffusion tensor imaging and fibre tractography. <i>European Radiology</i> , 2012, 22, 2806-2813.	4.5	29
31	A novel diffusion-tensor MRI approach for skeletal muscle fascicle length measurements. <i>Physiological Reports</i> , 2016, 4, e13012.	1.7	29
32	Diffusion tensor imaging of the human calf: Variation of inter- and intramuscle-specific diffusion parameters. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 46, 1137-1148.	3.4	28
33	A tri-exponential model for intravoxel incoherent motion analysis of the human kidney: In silico and during pharmacological renal perfusion modulation. <i>European Journal of Radiology</i> , 2017, 91, 168-174.	2.6	28
34	T ₂ relaxation-time mapping in healthy and diseased skeletal muscle using extended phase graph algorithms. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 2656-2670.	3.0	27
35	Multiparametric Renal MRI: An Intrasubject Test-Retest Repeatability Study. <i>Journal of Magnetic Resonance Imaging</i> , 2021, 53, 859-873.	3.4	26
36	Vasogenic edema versus neuroplasticity as neural correlates of hippocampal volume increase following electroconvulsive therapy. <i>Brain Stimulation</i> , 2020, 13, 1080-1086.	1.6	25

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37	Diffusion tensor imaging and fiber tractography for the visualization of the female pelvic floor. <i>Clinical Anatomy</i> , 2013, 26, 110-114.	2.7	24
38	Diffusion tensor imaging of the auditory nerve in patients with long-term single-sided deafness. <i>Hearing Research</i> , 2015, 323, 1-8.	2.0	24
39	Diffusion tensor imaging of the anterior cruciate ligament graft. <i>Journal of Magnetic Resonance Imaging</i> , 2017, 46, 1423-1432.	3.4	23
40	A robust deconvolution method to disentangle multiple water pools in diffusion MRI. <i>NMR in Biomedicine</i> , 2018, 31, e3965.	2.8	23
41	The YOUth cohort study: MRI protocol and test-retest reliability in adults. <i>Developmental Cognitive Neuroscience</i> , 2020, 45, 100816.	4.0	23
42	Quantitative MRI Reveals Microstructural Changes in the Upper Leg Muscles After Running a Marathon. <i>Journal of Magnetic Resonance Imaging</i> , 2020, 52, 407-417.	3.4	23
43	MRI of Skeletal Muscles in Participants with Type 2 Diabetes with or without Diabetic Polyneuropathy. <i>Radiology</i> , 2020, 297, 608-619.	7.3	21
44	Accelerated 4D phase contrast MRI in skeletal muscle contraction. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 1799-1811.	3.0	20
45	Diffusion tensor imaging reveals changes in non-fat infiltrated muscles in late onset Pompe disease. <i>Muscle and Nerve</i> , 2020, 62, 541-549.	2.2	20
46	Diffusion Tensor MRI of the Heart – In Vivo Imaging of Myocardial Fiber Architecture. <i>Current Cardiovascular Imaging Reports</i> , 2014, 7, 1.	0.6	19
47	Quantification of disease progression in spinal muscular atrophy with muscle MRI – a pilot study. <i>NMR in Biomedicine</i> , 2021, 34, e4473.	2.8	19
48	DTI Analysis Methods: Region of Interest Analysis. , 2016, , 175-182.		18
49	Myocardial Injury and Compromised Cardiomyocyte Integrity Following a Marathon Run. <i>JACC: Cardiovascular Imaging</i> , 2020, 13, 1445-1447.	5.3	18
50	QMRTools: a Mathematica toolbox for quantitative MRI analysis.. <i>Journal of Open Source Software</i> , 2019, 4, 1204.	4.6	18
51	Diffusion Tensor Magnetic Resonance Imaging and Fiber Tractography of the Sacral Plexus in Children with Spina Bifida. <i>Journal of Urology</i> , 2014, 192, 927-933.	0.4	17
52	Diffusion tensor MRI of the healthy brachial plexus. <i>PLoS ONE</i> , 2018, 13, e0196975.	2.5	17
53	An advanced magnetic resonance imaging perspective on the etiology of deep tissue injury. <i>Journal of Applied Physiology</i> , 2018, 124, 1580-1596.	2.5	16
54	Spherical deconvolution with tissue-specific response functions and multi-shell diffusion MRI to estimate multiple fiber orientation distributions (mFODs). <i>NeuroImage</i> , 2020, 222, 117206.	4.2	16

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55	PCA denoising and Wiener deconvolution of 31^{P} 3D CSI data to enhance effective SNR and improve point spread function. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 2992-3009.	3.0	15
56	Whole heart DTI using asymmetric bipolar diffusion gradients. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2015, 17, P15.	3.3	14
57	Assessment of passive muscle elongation using Diffusion Tensor MRI: Correlation between fiber length and diffusion coefficients. <i>NMR in Biomedicine</i> , 2016, 29, 1813-1824.	2.8	14
58	Diffusion tensor imaging of peripheral nerves in non-fixed post-mortem subjects. <i>Forensic Science International</i> , 2016, 263, 139-146.	2.2	14
59	DCE-MRI and IVIM-MRI of rabbit Vx2 tumors treated with MR-HIFU-induced mild hyperthermia. <i>Journal of Therapeutic Ultrasound</i> , 2016, 4, 9.	2.2	14
60	Diffusion tensor imaging of the human thigh: consideration of DTI-based fiber tracking stop criteria. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2020, 33, 343-355.	2.0	14
61	Multi-parametric MR in Becker muscular dystrophy patients. <i>NMR in Biomedicine</i> , 2020, 33, e4385.	2.8	14
62	Quantitative Muscle-MRI Correlates with Histopathology in Skeletal Muscle Biopsies. <i>Journal of Neuromuscular Diseases</i> , 2021, 8, 669-678.	2.6	14
63	Accelerated 4D self-gated MRI of tibiofemoral kinematics. <i>NMR in Biomedicine</i> , 2017, 30, e3791.	2.8	13
64	Multicenter reproducibility study of diffusion MRI and fiber tractography of the lumbosacral nerves. <i>Journal of Magnetic Resonance Imaging</i> , 2018, 48, 951-963.	3.4	13
65	Muscle diffusion tensor imaging in glycogen storage disease V (McArdle disease). <i>European Radiology</i> , 2019, 29, 3224-3232.	4.5	13
66	Low interrater reliability of brachial plexus MRI in chronic inflammatory neuropathies. <i>Muscle and Nerve</i> , 2020, 61, 779-783.	2.2	13
67	Mono, bi- and tri-exponential diffusion MRI modelling for renal solid masses and comparison with histopathological findings. <i>Cancer Imaging</i> , 2018, 18, 44.	2.8	12
68	The repeatability of bilateral diffusion tensor imaging (DTI) in the upper leg muscles of healthy adults. <i>European Radiology</i> , 2020, 30, 1709-1718.	4.5	12
69	Quantitative assessment of brachial plexus MRI for the diagnosis of chronic inflammatory neuropathies. <i>Journal of Neurology</i> , 2021, 268, 978-988.	3.6	12
70	Post-exercise intramuscular O_2 supply is tightly coupled with a higher proximal-to-distal ATP synthesis rate in human tibialis anterior. <i>Journal of Physiology</i> , 2021, 599, 1533-1550.	2.9	12
71	Crossing muscle fibers of the human tongue resolved in vivo using constrained spherical deconvolution. <i>Journal of Magnetic Resonance Imaging</i> , 2019, 50, 96-105.	3.4	11
72	Feasibility of in vivo whole heart DTI and IVIM with a 15 minute acquisition protocol. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2014, 16, O15.	3.3	10

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73	In Vivo Reconstruction of Lumbar Erector Spinae Architecture Using Diffusion Tensor MRI. <i>Clinical Spine Surgery</i> , 2016, 29, E139-E145.	1.3	10
74	On the sensitivity of the diffusion MRI signal to brain activity in response to a motor cortex paradigm. <i>Human Brain Mapping</i> , 2019, 40, 5069-5082.	3.6	10
75	3D Automated Segmentation of Lower Leg Muscles Using Machine Learning on a Heterogeneous Dataset. <i>Diagnostics</i> , 2021, 11, 1747.	2.6	10
76	On the generalizability of diffusion MRI signal representations across acquisition parameters, sequences and tissue types: Chronicles of the MEMENTO challenge. <i>NeuroImage</i> , 2021, 240, 118367.	4.2	10
77	Innovative Perspective: Gadolinium-Free Magnetic Resonance Imaging in Long-Term Follow-Up after Kidney Transplantation. <i>Frontiers in Physiology</i> , 2017, 8, 296.	2.8	9
78	Residual quadrupolar couplings observed in 7 Tesla deuterium MR spectra of skeletal muscle. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 1165-1173.	3.0	8
79	Magnetic resonance imaging of the cervical spinal cord in spinal muscular atrophy. <i>NeuroImage: Clinical</i> , 2019, 24, 102002.	2.7	7
80	Diffusion tensor imaging of the anterior cruciate ligament following primary repair with internal bracing: A longitudinal study. <i>Journal of Orthopaedic Research</i> , 2021, 39, 1318-1330.	2.3	7
81	Evaluation of interrater reliability of different muscle segmentation techniques in diffusion tensor imaging. <i>NMR in Biomedicine</i> , 2021, 34, e4430.	2.8	7
82	Diffusion Tensor Imaging Shows Differences Between Myotonic Dystrophy Type 1 and Type 2. <i>Journal of Neuromuscular Diseases</i> , 2021, 8, 949-962.	2.6	7
83	Decreased native renal $T_{1\rho}$ up to one week after gadobutrol administration in healthy volunteers. <i>Journal of Magnetic Resonance Imaging</i> , 2020, 52, 622-631.	3.4	6
84	Untangling the diffusion signal using the phasor transform. <i>NMR in Biomedicine</i> , 2020, 33, e4372.	2.8	6
85	T2* mapping in an equine articular groove model: Visualizing changes in collagen orientation. <i>Journal of Orthopaedic Research</i> , 2020, 38, 2383-2389.	2.3	6
86	Quantitative magnetic resonance imaging of the brachial plexus shows specific changes in nerve architecture in chronic inflammatory demyelinating polyneuropathy, multifocal motor neuropathy and motor neuron disease. <i>European Journal of Neurology</i> , 2021, 28, 2716-2726.	3.3	6
87	Dynamic brain ADC variations over the cardiac cycle and their relation to tissue strain assessed with $DENSE$ at $7T$ MRI. <i>Magnetic Resonance in Medicine</i> , 2022, 88, 266-279.	3.0	6
88	Post-mortem diffusion MRI of the cervical spine and its nerve roots. <i>Journal of Forensic Radiology and Imaging</i> , 2018, 12, 50-56.	1.2	5
89	Proton nuclear magnetic resonance J-spectroscopy of phantoms containing brain metabolites on a portable 0.05T MRI scanner. <i>Journal of Magnetic Resonance</i> , 2020, 320, 106834.	2.1	5
90	Cardiac Biomarker Kinetics and Their Association With Magnetic Resonance Measures of Cardiomyocyte Integrity Following a Marathon Run: Implications for Postexercise Biomarker Testing. <i>Journal of the American Heart Association</i> , 2021, 10, e020039.	3.7	5

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91	Marathon running transiently depletes the myocardial lipid pool. <i>Physiological Reports</i> , 2020, 8, e14543.	1.7	5
92	Diffusion tensor imaging of the anterior cruciate ligament graft following reconstruction: a longitudinal study. <i>European Radiology</i> , 2020, 30, 6673-6684.	4.5	4
93	Can sodium MRI be used as a method for mapping of cartilage stiffness?. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2021, 34, 327-336.	2.0	4
94	Ex vivo cardiac DTI: on the effects of diffusion time and b-value. <i>Journal of Cardiovascular Magnetic Resonance</i> , 2014, 16, P77.	3.3	3
95	High Inter-Rater Reliability of Manual Segmentation and Volume-Based Tractography in Healthy and Dystrophic Human Calf Muscle. <i>Diagnostics</i> , 2021, 11, 1521.	2.6	3
96	Dynamic Contrast-enhanced and Diffusion-weighted Magnetic Resonance Imaging for Response Evaluation After Single-Dose Ablative Neoadjuvant Partial Breast Irradiation. <i>Advances in Radiation Oncology</i> , 2022, 7, 100854.	1.2	3
97	Multi-parametric quantitative magnetic resonance imaging of the upper arm muscles of patients with spinal muscular atrophy. <i>NMR in Biomedicine</i> , 2022, 35, e4696.	2.8	3
98	Validation of multiparametric MRI by histopathology after nephrectomy: a case study. <i>Magnetic Resonance Materials in Physics, Biology, and Medicine</i> , 2021, 34, 377-387.	2.0	2
99	No need to detune transmitters in 32-channel receiver arrays at 7T. <i>NMR in Biomedicine</i> , 2021, 34, e4491.	2.8	1
100	MRI of the intraspinal nerve roots in patients with chronic inflammatory neuropathies: abnormalities correlate with clinical phenotypes. <i>Journal of Neurology</i> , 2022, , 1.	3.6	1
101	Robustness and stability of volume-based tractography in a multicenter setting. <i>NMR in Biomedicine</i> , 2022, , e4707.	2.8	1
102	Confirmatory factor analysis including MRI-derived adipose tissues quantification improves associations of metabolic dysregulation to diastolic dysfunction. <i>Journal of Diabetes and Its Complications</i> , 2022, 36, 108202.	2.3	1
103	Diffusion-tensor MRI reveals the complex muscle architecture of the human forearm. <i>Journal of Magnetic Resonance Imaging</i> , 2012, 36, spcone-spcone.	3.4	0
104	MP7-03 IMAGING MICROSTRUCTURAL PROPERTIES OF THE KIDNEYS USING DIFFUSION TENSOR- MRI. <i>Journal of Urology</i> , 2014, 191, .	0.4	0
105	G.O.10. Neuromuscular Disorders, 2014, 24, 852.	0.6	0
106	SP224 TRIANGULAR EXPONENTIAL APPROACH FOR INTRAVOXEL INCOHERENT MOTION ANALYSIS OF MULTI-B-VALUE DIFFUSION WEIGHTED MRI DATA FOLLOWS GFR CHANGES IN HEALTHY HUMANS. <i>Nephrology Dialysis Transplantation</i> , 2016, 31, i161-i161.	0.7	0
107	No Signs of Edema or Angiogenesis in the Hippocampus After Electroconvulsive Therapy. <i>Biological Psychiatry</i> , 2020, 87, S426.	1.3	0
108	The Authors Reply:. <i>JACC: Cardiovascular Imaging</i> , 2020, 13, 2063-2064.	5.3	0

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109	Quantitative Interpretation of Myocardial Fiber Structure in the Left and Right Ventricle of an Equine Heart Using Diffusion Tensor Cardiovascular Magnetic Resonance Imaging. Lecture Notes in Computer Science, 2021, , 178-188.	1.3	0
110	Denoising Moving Heart Wall Fibers Using Cartan Frames. Lecture Notes in Computer Science, 2017, , 672-680.	1.3	0
111	Muskel Diffusion Tensor Imaging (mDTI) zeigt signifikante VerÄnderungen in der noch nicht fettig degenerierten Skelettmuskulatur von Patienten mit einer Late-onset Pompe Erkrankung. Nervenheilkunde, 2019, 38, .	0.0	0
112	Can Marathon Running Induce Myocardial Microdamage?. Medicine and Science in Sports and Exercise, 2019, 51, 609-609.	0.4	0
113	The relationship between quantitative magnetic resonance imaging of the ankle plantar flexors, muscle function during walking and maximal strength in people with neuromuscular diseases. Clinical Biomechanics, 2022, 94, 105609.	1.2	0