Frank G Zöllner

List of Publications by Year
in descending order

119 papers	2,414 citations	236925 25 h-index	265206 42 g-index
135 all docs	135 docs citations	135 times ranked	3537 citing authors

#	Article	IF	Citations
1	Multi-class texture analysis in colorectal cancer histology. Scientific Reports, 2016, 6, 27988.	3.3	305
2	Assessment of 3D DCE-MRI of the kidneys using non-rigid image registration and segmentation of voxel time courses. Computerized Medical Imaging and Graphics, 2009, 33, 171-181.	5.8	104
3	A Generic Support Vector Machine Model for Preoperative Glioma Survival Associations. Radiology, 2015, 275, 228-234.	7.3	97
4	Comparison of grey matter volume and thickness for analysing cortical changes in chronic schizophrenia: A matter of surface area, grey/white matter intensity contrast, and curvature. Psychiatry Research - Neuroimaging, 2015, 231, 176-183.	1.8	71
5	Quantitative and Qualitative ^{23}Na MR Imaging of the Human Kidneys at 3 T: Before and after a Water Load. Radiology, 2011, 260, 857-865.	7.3	70
6	Myocardial T1-mapping at 3T using saturation-recovery: reference values, precision and comparison with MOLLI. Journal of Cardiovascular Magnetic Resonance, 2016, 18, 84.	3.3	70
7	UMMPerfusion: an Open Source Software Tool Towards Quantitative MRI Perfusion Analysis in Clinical Routine. Journal of Digital Imaging, 2013, 26, 344-352.	2.9	57
8	Quantitative Renal Perfusion Measurements in a Rat Model of Acute Kidney Injury at 3T: Testing Inter- and Intramethodical Significance of ASL and DCE-MRI. PLoS ONE, 2013, 8, e53849.	2.5	54
9	Continuous representation of tumor microvessel density and detection of angiogenic hotspots in histological whole-slide images. Oncotarget, 2015, 6, 19163-19176.	1.8	53
10	SVM-based glioma grading: Optimization by feature reduction analysis. Zeitschrift Fur Medizinische Physik, 2012, 22, 205-214.	1.5	48
11	Assessment of Kidney Volumes From MRI: Acquisition and Segmentation Techniques. American Journal of Roentgenology, 2012, 199, 1060-1069.	2.2	47
12	Fully-automated quality assurance in multi-center studies using MRI phantom measurements. Magnetic Resonance Imaging, 2014, 32, 771-780.	1.8	45
13	Quantitative lung perfusion evaluation using fourier decomposition perfusion MRI. Magnetic Resonance in Medicine, 2014, 72, 558-562.	3.0	43
14	Wavelet-based segmentation of renal compartments in DCE-MRI of human kidney: Initial results in patients and healthy volunteers. Computerized Medical Imaging and Graphics, 2012, 36, 108-118.	5.8	42
15	Predictive modeling in glioma grading from MR perfusion images using support vector machines. Magnetic Resonance in Medicine, 2008, 60, 945-952.	3.0	40
16	Quantitative sodium MRI of kidney. NMR in Biomedicine, 2016, 29, 197-205.	2.8	40
17	Machine learning in preoperative glioma MRI: Survival associations by perfusion-based support vector machine outperforms traditional MRI. Journal of Magnetic Resonance Imaging, 2014, 40, 47-54.	3.4	39
18	Comparison of automated brain segmentation using a brain phantom and patients with early Alzheimer's dementia or mild cognitive impairment. Psychiatry Research - Neuroimaging, 2015, 233, 299-305.	1.8	39

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19	"One-Stop Shop" Investigative Radiology, 2016, 51, 714-719.	6.2	36
20	Synthesis of CT images from digital body phantoms using CycleGAN. International Journal of Computer Assisted Radiology and Surgery, 2019, 14, 1741-1750.	2.8	35
21	Automatic Segmentation of Unstained Living Cells in Bright-Field Microscope Images. Lecture Notes in Computer Science, 2008, , 158-172.	1.3	30
22	Support vector machines in DSC-based glioma imaging: Suggestions for optimal characterization. Magnetic Resonance in Medicine, 2010, 64, 1230-1236.	3.0	27
23	Diffusion-weighted MR imaging of pancreatic cancer: A comparison of mono-exponential, bi-exponential and non-Gaussian kurtosis models. European Journal of Radiology Open, 2016, 3, 79-85.	1.6	27
24	Quantitative lung ventilation using Fourier decomposition MRI; comparison and initial study. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2014, 27, 467-476.	2.0	26
25	Sodium MRI of T1 High Signal Intensity in the Dentate Nucleus due to Gadolinium Deposition in Multiple Sclerosis. Journal of Neuroimaging, 2017, 27, 372-375.	2.0	26
26	Phase-contrast magnetic resonance imaging to assess renal perfusion: a systematic review and statement paper. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2020, 33, 3-21.	2.0	26
27	Simultaneous Measurement of Kidney Function by Dynamic Contrast Enhanced MRI and FITC-Sinistrin Clearance in Rats at 3 Tesla: Initial Results. PLoS ONE, 2013, 8, e79992.	2.5	26
28	Use of 3D DCE-MRI for the Estimation of Renal Perfusion and Glomerular Filtration Rate: An Intrasubject Comparison of FLASH and KWIC With a Comprehensive Framework for Evaluation. American Journal of Roentgenology, 2015, 204, W273-W281.	2.2	25
29	Kidney Segmentation in Renal Magnetic Resonance Imaging - Current Status and Prospects. IEEE Access, 2021, 9, 71577-71605.	4.2	25
30	Apparent Diffusion Coefficient and Sodium Concentration Measurements in Human Prostate Tissue via Hydrogen-1 and Sodium-23 Magnetic Resonance Imaging in a Clinical Setting at 3 T. Investigative Radiology, 2012, 47, 677-682.	6.2	23
31	An open source software for analysis of dynamic contrast enhanced magnetic resonance images: UMMPerfusion revisited. BMC Medical Imaging, 2016, 16, 7.	2.7	23
32	Quantitative pulmonary perfusion imaging at 3.0 T of 2-year-old children after congenital diaphragmatic hernia repair: initial results. European Radiology, 2012, 22, 2743-2749.	4.5	22
33	Renal perfusion in acute kidney injury with DCE-MRI: Deconvolution analysis versus two-compartment filtration model. Magnetic Resonance Imaging, 2014, 32, 781-785.	1.8	22
34	Free-Breathing Dynamic Contrast-Enhanced Imaging of the Upper Abdomen Using a Cartesian Compressed-Sensing Sequence With Hard-Gated and Motion-State-Resolved Reconstruction. Investigative Radiology, 2019, 54, 728-736.	6.2	22
35	Consensus-Based Technical Recommendations for Clinical Translation of Renal Phase Contrast <scp>MRI</scp>. Journal of Magnetic Resonance Imaging, 2022, 55, 323-335.	3.4	22
36	Convolutional Neural Network Ensemble Segmentation With Ratio-Based Sampling for the Arteries and Veins in Abdominal CT Scans. IEEE Transactions on Biomedical Engineering, 2021, 68, 1518-1526.	4.2	21

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37	Deep Learning-Based Total Kidney Volume Segmentation in Autosomal Dominant Polycystic Kidney Disease Using Attention, Cosine Loss, and Sharpness Aware Minimization. Diagnostics, 2022, 12, 1159.	2.6	21
38	Image registration in dynamic renal MRI—current status and prospects. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2020, 33, 33-48.	2.0	20
39	Non-invasive quantitative pulmonary V/Q imaging using Fourier decomposition MRI at 1.5T. Zeitschrift Fur Medizinische Physik, 2015, 25, 326-332.	1.5	19
40	Functional imaging of acute kidney injury at 3 Tesla: Investigating multiple parameters using DCE-MRI and a two-compartment filtration model. Zeitschrift Fur Medizinische Physik, 2015, 25, 58-65.	1.5	19
41	DCE–MRI of the human kidney using BLADE: A feasibility study in healthy volunteers. Journal of Magnetic Resonance Imaging, 2012, 35, 868-874.	3.4	18
42	New Colors for Histology: Optimized Bivariate Color Maps Increase Perceptual Contrast in Histological Images. PLoS ONE, 2015, 10, e0145572.	2.5	18
43	Simulation-based deep artifact correction with Convolutional Neural Networks for limited angle artifacts. Zeitschrift Fur Medizinische Physik, 2019, 29, 150-161.	1.5	18
44	Magnetic resonance fingerprinting for simultaneous renal T_1 and T_2^* mapping in a single breath–hold. Magnetic Resonance in Medicine, 2020, 83, 1940-1948.	3.0	18
45	High temporal versus high spatial resolution in MR quantitative pulmonary perfusion imaging of two-year old children after congenital diaphragmatic hernia repair. European Radiology, 2014, 24, 2427-2434.	4.5	17
46	Lung Perfusion MRI After Congenital Diaphragmatic Hernia Repair in 2-Year-Old Children With and Without Extracorporeal Membrane Oxygenation Therapy. American Journal of Roentgenology, 2016, 206, 1315-1320.	2.2	17
47	Diffusion kurtosis imaging of the liver at 3 Tesla: in vivo comparison to standard diffusion-weighted imaging. Acta Radiologica, 2018, 59, 18-25.	1.1	17
48	Blood flow quantification from 2D phase contrast MRI in renal arteries using an unsupervised data driven approach. Zeitschrift Fur Medizinische Physik, 2009, 19, 98-107.	1.5	16
49	Susceptibility Weighted Imaging (SWI) of the kidney at 3T – initial results. Zeitschrift Fur Medizinische Physik, 2010, 20, 143-150.	1.5	16
50	Quantitative arterial spin labelling perfusion measurements in rat models of renal transplantation and acute kidney injury at 3T. Zeitschrift Fur Medizinische Physik, 2017, 27, 39-48.	1.5	16
51	Dual assessment of kidney perfusion and pH by exploiting a dynamic CEST–MRI approach in an acute kidney ischemia–reperfusion injury murine model. NMR in Biomedicine, 2020, 33, e4287.	2.8	16
52	Color-coded visualization of magnetic resonance imaging multiparametric maps. Scientific Reports, 2017, 7, 41107.	3.3	15
53	Polyphonic sonification of electrocardiography signals for diagnosis of cardiac pathologies. Scientific Reports, 2017, 7, 44549.	3.3	15
54	A variational approach to image registration in dynamic contrast-enhanced MRI of the human kidney. Magnetic Resonance Imaging, 2013, 31, 771-777.	1.8	14

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55	Identification of a characteristic vascular belt zone in human colorectal cancer. PLoS ONE, 2017, 12, e0171378.	2.5	14
56	Influence of Gadolinium-Based Contrast Agents on Tissue Sodium Quantification in Sodium Magnetic Resonance Imaging. Investigative Radiology, 2018, 53, 555-562.	6.2	14
57	Generation of annotated multimodal ground truth datasets for abdominal medical image registration. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 1277-1285.	2.8	14
58	Black-blood native T_1 mapping: Blood signal suppression for reduced partial voluming in the myocardium. Magnetic Resonance in Medicine, 2017, 78, 484-493.	3.0	12
59	Comparison of perfusion models for quantitative T1 weighted DCE-MRI of rectal cancer. Scientific Reports, 2017, 7, 12036.	3.3	12
60	Saturation-Recovery Myocardial T1-Mapping during Systole: Accurate and Robust Quantification in the Presence of Arrhythmia. Scientific Reports, 2018, 8, 5251.	3.3	12
61	Accelerated white matter lesion analysis based on simultaneous T_1 and T_2^{*} quantification using magnetic resonance fingerprinting and deep learning. Magnetic Resonance in Medicine, 2021, 86, 471-486.	3.0	12
62	Pre-clinical functional Magnetic Resonance Imaging part II: The heart. Zeitschrift Fur Medizinische Physik, 2014, 24, 307-322.	1.5	11
63	Pre-clinical functional Magnetic Resonance Imaging part I: The kidney. Zeitschrift Fur Medizinische Physik, 2014, 24, 286-306.	1.5	11
64	Region of interest-based versus whole-lung segmentation-based approach for MR lung perfusion quantification in 2-year-old children after congenital diaphragmatic hernia repair. European Radiology, 2016, 26, 4231-4238.	4.5	11
65	Design of a multimodal (1 H/ 23 Na MR/CT) anthropomorphic thorax phantom. Zeitschrift Fur Medizinische Physik, 2017, 27, 124-131.	1.5	11
66	A novel 3D printed mechanical actuator using centrifugal force for magnetic resonance elastography: Initial results in an anthropomorphic prostate phantom. PLoS ONE, 2018, 13, e0205442.	2.5	11
67	Fast and Robust Design of Time-Optimal k-Space Trajectories in MRI. IEEE Transactions on Medical Imaging, 2015, 34, 564-577.	8.9	10
68	N-octanoyl dopamine treatment exerts renoprotective properties in acute kidney injury but not in renal allograft recipients. Nephrology Dialysis Transplantation, 2016, 31, 564-573.	0.7	10
69	Automated Screening for Abdominal Aortic Aneurysm in CT Scans under Clinical Conditions Using Deep Learning. Diagnostics, 2021, 11, 2131.	2.6	10
70	Correlation analysis of dual-energy CT iodine maps with quantitative pulmonary perfusion MRI. World Journal of Radiology, 2013, 5, 202.	1.1	9
71	^{23}Na MRI in ischemic stroke: Acquisition time reduction using postprocessing with convolutional neural networks. NMR in Biomedicine, 2021, 34, e4474.	2.8	9
72	Fourier decomposition pulmonary MRI using a variable flip angle balanced steady-state free precession technique. Magnetic Resonance in Medicine, 2015, 73, 1999-2004.	3.0	8

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73	Histogram based analysis of lung perfusion of children after congenital diaphragmatic hernia repair. Magnetic Resonance Imaging, 2018, 48, 42-49.	1.8	8
74	Tomosynthesis implementation with adaptive online calibration on clinical C-arm systems. International Journal of Computer Assisted Radiology and Surgery, 2018, 13, 1481-1495.	2.8	8
75	Multiparametric MRI in the Diagnosis of Prostate Cancer: Physical Foundations, Limitations, and Prospective Advances ofÂDiffusion-Weighted MRI. RoFo Fortschritte Auf Dem Gebiet Der Rontgenstrahlen Und Der Bildgebenden Verfahren, 2021, 193, 399-409.	1.3	8
76	End-to-End Deep Learning CT Image Reconstruction for Metal Artifact Reduction. Applied Sciences (Switzerland), 2022, 12, 404.	2.5	8
77	Classification of Segmented Regions in Brightfield Microscope Images. , 2006, , .		7
78	Quantitative assessment of kidney function using dynamic contrast enhanced MRI - steps towards an integrated software prototype. , 2009, , .		7
79	Semi-automatic lung segmentation of DCE-MRI data sets of 2-year old children after congenital diaphragmatic hernia repair: Initial results. Magnetic Resonance Imaging, 2015, 33, 1345-1349.	1.8	7
80	Feasibility of quantitative MR-perfusion imaging to monitor treatment response after uterine artery embolization (UAE) in symptomatic uterus fibroids. Magnetic Resonance Imaging, 2019, 59, 31-38.	1.8	7
81	Functionalizable composite nanoparticles as a dual magnetic resonance imaging/computed tomography contrast agent for medical imaging. Journal of Applied Polymer Science, 2019, 136, 47571.	2.6	5
82	Sodium (23Na) MRI of the Kidney: Basic Concept. Methods in Molecular Biology, 2021, 2216, 257-266.	0.9	5
83	MR lung perfusion measurements in adolescents after congenital diaphragmatic hernia: correlation with spirometric lung function tests. European Radiology, 2022, 32, 2572-2580.	4.5	5
84	Comparing anisotropic diffusion filters for the enhancement of sodium magnetic resonance images. Magnetic Resonance Imaging, 2012, 30, 1192-1200.	1.8	4
85	Coupled actuators with a mechanically synchronized phase during MR elastography: A phantom feasibility study. Concepts in Magnetic Resonance Part B, 2018, 48B, .	0.7	4
86	Cerebral Perfusion After Repair of Congenital Diaphragmatic Hernia with Common Carotid Artery Occlusion After ECMO Therapy. In Vivo, 2017, 31, 557-564.	1.3	4
87	An anthropomorphic pelvis phantom for MRâ€guided prostate interventions. Magnetic Resonance in Medicine, 2022, 87, 1605-1612.	3.0	4
88	Acceleration of Magnetic Resonance Fingerprinting Reconstruction Using Denoising and Self-Attention Pyramidal Convolutional Neural Network. Sensors, 2022, 22, 1260.	3.8	4
89	Phaseâ€cycled balanced SSFP imaging for nonâ€contrastâ€enhanced functional lung imaging. Magnetic Resonance in Medicine, 2022, 88, 1764-1774.	3.0	4
90	On the representation of cells in bone marrow pathology by a scalar field: propagation through serial sections, co-localization and spatial interaction analysis. Diagnostic Pathology, 2015, 10, 151.	2.0	3

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91	A novel 3D-printed mechanical actuator using centrifugal force for magnetic resonance elastography. , 2017, 2017, 3541-3544.		3
92	Risk assessment of copper-containing contraceptives: the impact for women with implanted intrauterine devices during clinical MRI and CT examinations. European Radiology, 2019, 29, 2812-2820.	4.5	3
93	Morphological and functional assessment of the uterus: â€œone-stop shop imagingâ€•using a compressed-sensing accelerated, free-breathing T1-VIBE sequence. Acta Radiologica, 2021, 62, 695-704.	1.1	3
94	Dynamic Contrast Enhancement (DCE) MRIâ€"Derived Renal Perfusion and Filtration: Basic Concepts. Methods in Molecular Biology, 2021, 2216, 205-227.	0.9	3
95	Lesion probability mapping in MS patients using a regression network on MR fingerprinting. BMC Medical Imaging, 2021, 21, 107.	2.7	3
96	Analysis Protocol for Renal Sodium (23Na) MR Imaging. Methods in Molecular Biology, 2021, 2216, 689-696.	0.9	3
97	Deep Voxel-Guided Morphometry (VGM): Learning Regional Brain Changes in Serial MRI. Lecture Notes in Computer Science, 2020, , 159-168.	1.3	3
98	Assessment of Renal Function from 3D Dynamic Contrast Enhanced MR Images Using Independent Component Analysis. , 2007, , 237-241.		3
99	Development of an abdominal phantom for the validation of an oligometastatic disease diagnosis workflow. Medical Physics, 2022, 49, 4445-4454.	3.0	3
100	Are We There Yet? The Value of Deep Learning in a Multicenter Setting for Response Prediction of Locally Advanced Rectal Cancer to Neoadjuvant Chemoradiotherapy. Diagnostics, 2022, 12, 1601.	2.6	3
101	Dynamic Contrast Enhanced (DCE) MRI-Derived Renal Perfusion and Filtration: Experimental Protocol. Methods in Molecular Biology, 2021, 2216, 429-441.	0.9	2
102	First experiences of local pulse wave velocity measurements in 4D-MRI in focally stented femoropopliteal arteries. Vasa - European Journal of Vascular Medicine, 2021, 50, 468-474.	1.4	2
103	Sodium (23Na) MRI of the Kidney: Experimental Protocol. Methods in Molecular Biology, 2021, 2216, 473-480.	0.9	2
104	Multimodal image registration of pre- and intra-interventional data for surgical planning of transarterial chemoembolisation. , 2019, , .		2
105	Tumor tissue analysis by self organizing maps from combined DCE-/DSC-MRI data. , 2009, , .		1
106	Arterial Spin Labeling: A Noninvasive Method to Assess Renal Perfusion after Ischemia-Reperfusion Injury. Transplantation, 2012, 94, 1136.	1.0	1
107	Deterministic Arterial Input Function selection in DCE-MRI for automation of quantitative perfusion calculation of colorectal cancer. Magnetic Resonance Imaging, 2021, 75, 116-123.	1.8	1
108	Analysis Protocol for Dynamic Contrast Enhanced (DCE) MRI of Renal Perfusion and Filtration. Methods in Molecular Biology, 2021, 2216, 637-653.	0.9	1

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109	Impact of Chronic Prostatitis on the PI-RADS Score 3: Proposal for the Addition of a Novel Binary Suffix. Diagnostics, 2021, 11, 623.	2.6	1
110	A Modified Surgical Model of Hind Limb Ischemia in ApoE$^{-/-}$ Mice using a Miniature Incision. Journal of Visualized Experiments, 2021, , .	0.3	1
111	The number of glomeruli and pyruvate metabolism is not strongly coupled in the healthy rat kidney. Magnetic Resonance in Medicine, 2022, 87, 896-903.	3.0	1
112	Flow Quantification from 2D Phase Contrast MRI in Renal Arteries Using Clustering. Informatik Aktuell, 2008, , 377-381.	0.6	1
113	Feature-based CBCT self-calibration for arbitrary trajectories. International Journal of Computer Assisted Radiology and Surgery, 2022, 17, 2151-2159.	2.8	1
114	Morphological and functional MRI of kidney. Zeitschrift Fur Medizinische Physik, 2010, 20, 85.	1.5	0
115	Investigation of 3D histograms of oriented gradients for image-based registration of CT with interventional CBCT. , 2017, , .		0
116	Editorial for â€œQualitative and Quantitative Reporting of a Unique Biparametric MRI: Towards Biparametric MRIâ€‘Based Nomograms for Prediction of Prostate Biopsy Outcome in Men With a Clinical Suspicion of Prostate Cancer (IMPROD and MULTIâ€‘IMPROD Trials)â€• Journal of Magnetic Resonance Imaging, 2020, 51, 1568-1569.	3.4	0
117	Analysis of 2D Phase Contrast MRI in Renal Arteries by Self Organizing Maps. Informatik Aktuell, 2009, , 425-429.	0.6	0
118	Technische Grundlagen der Prostata-MRT. , 2017, , 1-18.		0
119	3D Histograms of Oriented Gradients zur Registrierung von regulären CT mit interventionellen CBCT Daten. Informatik Aktuell, 2017, , 154-154.	0.6	0