Wolfgang Kainz

List of Publications by Citations

67 papers	2,324 citations	17 h-index	48 g-index
67 ext. papers	2,974 ext. citations	3.1 avg, IF	4.62 L-index

#	Paper	IF	Citations
67	The Virtual Family--development of surface-based anatomical models of two adults and two children for dosimetric simulations. *Physics in Medicine and Biology*, **2010**, 55, N23-38	3.8	968
66	Development of a new generation of high-resolution anatomical models for medical device evaluation: the Virtual Population 3.0. *Physics in Medicine and Biology*, **2014**, 59, 5287-303	3.8	221
65	MIDA: A Multimodal Imaging-Based Detailed Anatomical Model of the Human Head and Neck. *PLoS ONE*, **2015**, 10, e0124126	3.7	127
64	Comparisons of Computed Mobile Phone Induced SAR in the SAM Phantom to That in Anatomically Correct Models of the Human Head. *IEEE Transactions on Electromagnetic Compatibility*, **2006**, 48, 397-407	2	115
63	Complexity of MRI induced heating on metallic leads: experimental measurements of 374 configurations. *BioMedical Engineering OnLine*, **2008**, 7, 11	4.1	110
62	Dosimetric comparison of the specific anthropomorphic mannequin (SAM) to 14 anatomical head models using a novel definition for the mobile phone positioning. *Physics in Medicine and Biology*, **2005**, 50, 3423-45	3.8	81
61	A Technique to Evaluate MRI-Induced Electric Fields at the Ends of Practical Implanted Lead. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 305-313	4.1	71
60	Thermal tissue damage model analyzed for different whole-body SAR and scan durations for standard MR body coils. *Magnetic Resonance in Medicine*, **2014**, 71, 421-31	4.4	61
59	Evaluation of the RF heating of a generic deep brain stimulator exposed in 1.5 T magnetic resonance scanners. *Bioelectromagnetics*, **2013**, 34, 104-13	1.6	50
58	Whole-body and local RF absorption in human models as a function of anatomy and position within 1.5T MR body coil. *Magnetic Resonance in Medicine*, **2014**, 71, 839-45	4.4	43
57	Computational and experimental studies of an orthopedic implant: MRI-related heating at 1.5-T/64-MHz and 3-T/128-MHz. *Journal of Magnetic Resonance Imaging*, **2013**, 37, 491-7	5.6	43
56	Pregnant women models analyzed for RF exposure and temperature increase in 3T RF shimmed birdcages. *Magnetic Resonance in Medicine*, **2017**, 77, 2048-2056	4.4	34
55	Virtual population-based assessment of the impact of 3 Tesla radiofrequency shimming and thermoregulation on safety and B1 + uniformity. *Magnetic Resonance in Medicine*, **2016**, 76, 986-97	4.4	32
54	Advances in Computational Human Phantoms and Their Applications in Biomedical Engineering - A Topical Review. *IEEE Transactions on Radiation and Plasma Medical Sciences*, **2019**, 3, 1-23	4.2	31
53	The Role of Computational Modeling and Simulation in the Total Product Life Cycle of Peripheral Vascular Devices. *Journal of Medical Devices, Transactions of the ASME*, **2017**, 11,	1.3	24
52	A Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devices. *IEEE Transactions on Microwave Theory and Techniques*, **2018**, 66, 4271-4281	4.1	22
51	Patient-specific simulations and measurements of the magneto-hemodynamic effect in human primary vessels. *Physiological Measurement*, **2012**, 33, 117-30	2.9	18

50	. *IEEE Transactions on Electromagnetic Compatibility*, **2018**, 60, 598-604	2	17
49	Assessment of Human Exposure to Electromagnetic Fields: Review and Future Directions. *IEEE Transactions on Electromagnetic Compatibility*, **2021**, 63, 1619-1630	2	17
48	Functionalized anatomical models for EM-neuron Interaction modeling. *Physics in Medicine and Biology*, **2016**, 61, 4390-401	3.8	17
47	. *IEEE Transactions on Electromagnetic Compatibility*, **2015**, 57, 635-642	2	16
46	Computational and experimental investigation of RF-induced heating for multiple orthopedic implants. *Magnetic Resonance in Medicine*, **2019**, 82, 1848-1858	4.4	13
45	Functionalized Anatomical Models for Computational Life Sciences. *Frontiers in Physiology*, **2018**, 9, 1594	4.6	13
44	Lead Electromagnetic Model to Evaluate RF-Induced Heating of a Coax Lead: A Numerical Case Study at 128 MHz. *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, **2018**, 2, 286-293	2.8	13
43	Evaluation of MRI RF electromagnetic field induced heating near leads of cochlear implants. *Physics in Medicine and Biology*, **2018**, 63, 135020	3.8	12
42	. *IEEE Transactions on Electromagnetic Compatibility*, **2019**, 61, 1423-1431	2	10
41	Numerical study of SAR for multi-component orthopaedic hip replacement system during MRI **2016** ,		10
40	Evaluations of the MRI RF-Induced Heating for Helical Stents Under a 1.5T MRI System. *IEEE Transactions on Electromagnetic Compatibility*, **2019**, 61, 57-64	2	10
39	On the development of equivalent medium for active implantable device radiofrequency safety assessment. *Magnetic Resonance in Medicine*, **2019**, 82, 1164-1176	4.4	8
38	. *IEEE Transactions on Electromagnetic Compatibility*, **2017**, 59, 805-812	2	8
37	Sensitivity of the transfer function of a helix lead on the dielectric properties of the surrounding media: A case study **2017**,		7
36	Effect of insulating layer material on RF-induced heating for external fixation system in 1.5 T MRI system. *Electromagnetic Biology and Medicine*, **2014**, 33, 223-7	2.2	7
35	On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment. *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 2234-2242	4.1	7
34	. *IEEE Transactions on Electromagnetic Compatibility*, **2020**, 62, 673-681	2	7
33	Computational study of external fixation devices surface heating in MRI RF environment **2012**,		6

32	. *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, **2019**, 3, 247-253	2.8	5
31	Investigations on Tissue-Simulating Medium for MRI RF Safety Assessment for Patients With Active Implantable Medical Devices. *IEEE Transactions on Electromagnetic Compatibility*, **2019**, 61, 1091-1097	2	5
30	Comparison of Different Assessment Quantities to Evaluate Lead Electromagnetic Model for Radio Frequency Energy-Induced Heating. *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, **2020**, 4, 157-163	2.8	5
29	Modeling radiofrequency responses of realistic multi-electrode leads containing helical and straight wires. *Magnetic Resonance Materials in Physics, Biology, and Medicine*, **2020**, 33, 421-437	2.8	5
28	. *IEEE Transactions on Electromagnetic Compatibility*, **2019**, 61, 1432-1437	2	5
27	. *IEEE Transactions on Instrumentation and Measurement*, **2020**, 69, 6381-6389	5.2	4
26	. *IEEE Transactions on Electromagnetic Compatibility*, **2019**, 61, 1726-1732	2	4
25	Anatomical Model Uncertainty for RF Safety Evaluation of Metallic Implants Under MRI Exposure. *Bioelectromagnetics*, **2019**, 40, 458-471	1.6	4
24	Efficient evaluation of MRI-induced electric fields in the vicinity of implantable lead **2013**,		4
23	Impacts of RF shimming on MRI induced heating of implantable medical lead in 3T birdcage coil **2017**,		4
22	Wire-based sternal closure: MRI-related heating at 1.5 T/64 MHz and 3 T/128 MHz based on simulation and experimental phantom study. *Magnetic Resonance in Medicine*, **2020**, 83, 1055-1065	4.4	4
21	. *IEEE Transactions on Electromagnetic Compatibility*, **2020**, 62, 43-51	2	4
20	Novel mechanistic model and computational approximation for electromagnetic safety evaluations of electrically short implants. *Physics in Medicine and Biology*, **2018**, 63, 225015	3.8	4
19	. *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 509-515	4.1	3
18	. *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 5423-5431	4.1	3
17	Influence of a Metallic Shield on RF-Induced Heating of a Lead with Straight and Helical Wires **2019**,		2
16	Modeling radio-frequency energy-induced heating due to the presence of transcranial electric stimulation setup at 3T. *Magnetic Resonance Materials in Physics, Biology, and Medicine*, **2020**, 33, 793-807	2.8	2
15	Genetic algorithm search for the worst-case MRI RF exposure for a multiconfiguration implantable fixation system modeled using artificial neural networks. *Magnetic Resonance in Medicine*, **2020**, 84, 2754-2764	4.4	2

List of Publications

14	Radiofrequency-induced heating of broken and abandoned implant leads during magnetic resonance examinations. *Magnetic Resonance in Medicine*, **2021**, 86, 2156-2164	4.4	2
13	Modeling Electromagnetic Exposure in Humans Inside a Whole-Body Birdcage Coil Excited by a Two-Channel Parallel Transmitter Operated at 123 MHz. *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, **2020**, 4, 247-253	2.8	1
12	MRSaiFE: An AI-based Approach Towards the Real-Time Prediction of Specific Absorption Rate. *IEEE Access*, **2021**, 9, 140824-140834	3.5	1
11	. *IEEE Transactions on Electromagnetic Compatibility*, **2020**, 62, 2689-2695	2	1
10	Impact of RF Shimming on RF-Induced Heating Near Implantable Medical Electrodes in a 3T MRI Coil. *IEEE Transactions on Electromagnetic Compatibility*, **2020**, 62, 52-64	2	1
9	Effects of patient orientations, landmark positions, and device positions on the MRI RF-induced heating for modular external fixation devices. *Magnetic Resonance in Medicine*, **2021**, 85, 1669-1680	4.4	0
8	A technique for the reduction of RF-induced heating of active implantable medical devices during MRI. *Magnetic Resonance in Medicine*, **2022**, 87, 349-364	4.4	0
7	Magnetic resonance conditionality of abandoned leads from active implantable medical devices at 1.5 T. *Magnetic Resonance in Medicine*, **2022**, 87, 394-408	4.4	0
6	Erratum to MRI Heating Reduction for External Fixation Devices Using Absorption Material [Aug 15 635-642]. *IEEE Transactions on Electromagnetic Compatibility*, **2020**, 62, 981-981	2	
5	Erratum to A Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devices *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 2468-2468	4.1	
4	Erratum to On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment *IEEE Transactions on Microwave Theory and Techniques*, **2020**, 68, 2469-2469	4.1	
3	A Cascaded Heterogeneous Equivalent Network for Evaluating RF-Induced Hazards on Active Implantable Medical Devices. *IEEE Transactions on Electromagnetic Compatibility*, **2021**, 1-9	2	
2	. *IEEE Transactions on Electromagnetic Compatibility*, **2021**, 63, 673-680	2	
1	Correction to MRSaiFE: An AI-Based Approach Toward the Real-Time Prediction of Specific Absorption Rate *IEEE Access*, **2022**, 10, 19925-19925	3.5	