# Wolfgang Kainz

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6781433/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 67 papers | 3,315 citations | 361045 20 h-index | 149479 56 g-index |
| 67 all docs | 67 docs citations | 67 times ranked | 2482 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The Virtual Familyâ€"development of surface-based anatomical models of two adults and two children for dosimetric simulations. Physics in Medicine and Biology, 2010, 55, N23-N38. | 1.6 | 1,237 |
| 2 | 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, 5287-5303. | 1.6 | 355 |
| 3 | MIDA: A Multimodal Imaging-Based Detailed Anatomical Model of the Human Head and Neck. PLoS ONE, 2015, 10, e0124126. | 1.1 | 220 |
| 4 | 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. | 1.4 | 152 |
| 5 | Complexity of MRI induced heating on metallic leads: Experimental measurements of 374 configurations. BioMedical Engineering OnLine, 2008, 7, 11. | 1.3 | 148 |
| 6 | 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, 3423-3445. | 1.6 | 116 |
| 7 | 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. | 2.9 | 103 |
| 8 | Thermal Tissue Damage Model Analyzed for Different Wholeâ€Body SAR and Scan Durations for Standard MR Body Coils. Magnetic Resonance in Medicine, 2014, 71, 421-431. | 1.9 | 76 |
| 9 | Assessment of Human Exposure to Electromagnetic Fields: Review and Future Directions. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 1619-1630. | 1.4 | 62 |
| 10 | Evaluation of the RF heating of a generic deep brain stimulator exposed in 1.5â€‰T magnetic resonance scanners. Bioelectromagnetics, 2013, 34, 104-113. | 0.9 | 60 |
| 11 | Advances in Computational Human Phantoms and Their Applications in Biomedical Engineeringâ€"A Topical Review. IEEE Transactions on Radiation and Plasma Medical Sciences, 2019, 3, 1-23. | 2.7 | 58 |
| 12 | Computational and experimental studies of an orthopedic implant: MRIâ€related heating at 1.5â€T/64â€MHz and 3â€T/128â€MHz. Journal of Magnetic Resonance Imaging, 2013, 37, 491-497. | 1.9 | 57 |
| 13 | Wholeâ€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, 839-845. | 1.9 | 55 |
| 14 | Virtual populationâ€based assessment of the impact of 3 Tesla radiofrequency shimming and thermoregulation on safety and B<sub>1</sub>+ uniformity. Magnetic Resonance in Medicine, 2016, 76, 986-997. | 1.9 | 42 |
| 15 | Pregnant women models analyzed for <scp>RF</scp> exposure and temperature increase in <scp>3T</scp><scp>RF</scp> shimmed birdcages. Magnetic Resonance in Medicine, 2017, 77, 2048-2056. | 1.9 | 42 |
| 16 | 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, . | 0.4 | 35 |
| 17 | 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. | 2.9 | 30 |
| 18 | MRI Heating Reduction for External Fixation Devices Using Absorption Material. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 635-642. | 1.4 | 21 |

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|---|---|---|---|
| 19 | Numerical Investigations of MRI RF-Induced Heating for External Fixation Device in TEM and Birdcage Body Coils at 3 T. IEEE Transactions on Electromagnetic Compatibility, 2018, 60, 598-604. | 1.4 | 21 |
| 20 | Evaluation of MRI RF electromagnetic field induced heating near leads of cochlear implants. Physics in Medicine and Biology, 2018, 63, 135020. | 1.6 | 21 |
| 21 | Patient-specific simulations and measurements of the magneto-hemodynamic effect in human primary vessels. Physiological Measurement, 2012, 33, 117-130. | 1.2 | 20 |
| 22 | Functionalized anatomical models for EM-neuron Interaction modeling. Physics in Medicine and Biology, 2016, 61, 4390-4401. | 1.6 | 19 |
| 23 | Computational and experimental investigation of RFâ€induced heating for multiple orthopedic implants. Magnetic Resonance in Medicine, 2019, 82, 1848-1858. | 1.9 | 19 |
| 24 | Functionalized Anatomical Models for Computational Life Sciences. Frontiers in Physiology, 2018, 9, 1594. | 1.3 | 18 |
| 25 | Prediction of MRI RF Exposure for Implantable Plate Devices Using Artificial Neural Network. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 673-681. | 1.4 | 18 |
| 26 | 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. | 2.3 | 17 |
| 27 | Magnetic resonance conditionality of abandoned leads from active implantable medical devices at 1.5 T. Magnetic Resonance in Medicine, 2022, 87, 394-408. | 1.9 | 16 |
| 28 | 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. | 1.4 | 15 |
| 29 | Numerical study of SAR for multi-component orthopaedic hip replacement system during MRI. , 2016, , . | | 13 |
| 30 | Anatomical Model Uncertainty for RF Safety Evaluation of Metallic Implants Under MRI Exposure. Bioelectromagnetics, 2019, 40, 458-471. | 0.9 | 12 |
| 31 | Impact of Electrode Structure on RF-Induced Heating for an AIMD Implanted Lead in a 1.5-Tesla MRI System. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2019, 3, 247-253. | 2.3 | 12 |
| 32 | On the Model Validation of Active Implantable Medical Device for MRI Safety Assessment. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 2234-2242. | 2.9 | 12 |
| 33 | Radiofrequencyâ€induced heating of broken and abandoned implant leads during magnetic resonance examinations. Magnetic Resonance in Medicine, 2021, 86, 2156-2164. | 1.9 | 12 |
| 34 | A Novel Design of Implantable Esophageal Stent to Reduce the MRI RF-Induced Heating. IEEE Transactions on Electromagnetic Compatibility, 2017, 59, 805-812. | 1.4 | 11 |
| 35 | Novel mechanistic model and computational approximation for electromagnetic safety evaluations of electrically short implants. Physics in Medicine and Biology, 2018, 63, 225015. | 1.6 | 11 |
| 36 | Investigation of RF-Induced Heating Near Interventional Catheters at 1.5 T MRI: A Combined Modeling and Experimental Study. IEEE Transactions on Electromagnetic Compatibility, 2019, 61, 1423-1431. | 1.4 | 11 |

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| 37 | On the development of equivalent medium for active implantable device radiofrequency safety assessment. Magnetic Resonance in Medicine, 2019, 82, 1164-1176. | 1.9 | 11 |
| 38 | A Novel Device Model Validation Strategy for 1.5- and 3-T MRI Heating Safety Assessment. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 6381-6389. | 2.4 | 11 |
| 39 | MRSaiFE: An AI-Based Approach Towards the Real-Time Prediction of Specific Absorption Rate. IEEE Access, 2021, 9, 140824-140834. | 2.6 | 11 |
| 40 | Effect of insulating layer material on RF-induced heating for external fixation system in 1.5â€‰T MRI system. Electromagnetic Biology and Medicine, 2014, 33, 223-227. | 0.7 | 10 |
| 41 | Computational study of external fixation devices surface heating in MRI RF environment. , 2012, , . | | 9 |
| 42 | 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. | 1.4 | 9 |
| 43 | An Absorbing Radio Frequency Shield to Reduce RF Heating Induced by Deep Brain Stimulator During 1.5-T MRI. IEEE Transactions on Electromagnetic Compatibility, 2019, 61, 1726-1732. | 1.4 | 8 |
| 44 | Simplified Transfer Function Assessment of Implantable Leads for MRI Safety Evaluations. IEEE Transactions on Electromagnetic Compatibility, 2019, 61, 1432-1437. | 1.4 | 8 |
| 45 | Genetic algorithm search for the worstâ€case MRI RF exposure for a multiconfiguration implantable fixation system modeled using artificial neural networks. Magnetic Resonance in Medicine, 2020, 84, 2754-2764. | 1.9 | 8 |
| 46 | A technique for the reduction of RFâ€induced heating of active implantable medical devices during MRI. Magnetic Resonance in Medicine, 2022, 87, 349-364. | 1.9 | 8 |
| 47 | Sensitivity of the transfer function of a helix lead on the dielectric properties of the surrounding media: A case study. , 2017, , . | | 7 |
| 48 | Study on Search Strategies for Assessing the Worst Case RF-Induced Heating for Multi-Configuration Implant System Under MRI. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 43-51. | 1.4 | 6 |
| 49 | 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. | 1.1 | 6 |
| 50 | Wireâ€based sternal closure: MRIâ€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. | 1.9 | 6 |
| 51 | Influence of Metallic Shielding on Radio Frequency Energy-Induced Heating of Leads With Straight and Helical Wires: A Numerical Case Study. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 509-515. | 2.9 | 6 |
| 52 | Efficient evaluation of MRI-induced electric fields in the vicinity of implantable lead. , 2013, , . | | 5 |
| 53 | Impacts of RF shimming on MRI induced heating of implantable medical lead in 3T birdcage coil. , 2017, , . | | 5 |
| 54 | 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. | 2.3 | 5 |

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|---|---|---|---|
| 55 | Developing AIMD Models Using Orthogonal Pathways for MRI Safety Assessment. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 2689-2695. | 1.4 | 5 |
| 56 | Dual-Frequency High-Electric-Field Generator for MRI Safety Testing of Passive Implantable Medical Devices. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 5423-5431. | 2.9 | 5 |
| 57 | 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. | 1.1 | 5 |
| 58 | Effects of patient orientations, landmark positions, and device positions on the MRI RFâ€induced heating for modular external fixation devices. Magnetic Resonance in Medicine, 2021, 85, 1669-1680. | 1.9 | 5 |
| 59 | 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. | 1.4 | 4 |
| 60 | Influence of a Metallic Shield on RF-Induced Heating of a Lead with Straight and Helical Wires. , 2019, , . | | 2 |
| 61 | 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. | 2.3 | 1 |
| 62 | A Fast and Accurate Transfer Function Validation Strategy Using Optimized Rotation-Invariant Lead Trajectories. IEEE Transactions on Electromagnetic Compatibility, 2021, 63, 673-680. | 1.4 | 1 |
| 63 | Erratum to â€œA Transmission Line Model for the Evaluation of MRI RF-Induced Fields on Active Implantable Medical Devicesâ€• IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 2468-2468. | 2.9 | 1 |
| 64 | Erratum to â€œMRI Heating Reduction for External Fixation Devices Using Absorption Materialâ€•[Aug 15 635-642]. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 981-981. | 1.4 | 0 |
| 65 | Erratum to â€œOn the Model Validation of Active Implantable Medical Device for MRI Safety Assessmentâ€• IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 2469-2469. | 2.9 | 0 |
| 66 | A Cascaded Heterogeneous Equivalent Network for Evaluating RF-Induced Hazards on Active Implantable Medical Devices. IEEE Transactions on Electromagnetic Compatibility, 2022, 64, 286-294. | 1.4 | 0 |
| 67 | Correction to â€œMRSaiFE: An AI-Based Approach Toward the Real-Time Prediction of Specific Absorption Rateâ€• IEEE Access, 2022, 10, 19925-19925. | 2.6 | 0 |