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ISMRM
MAGNETIC RESONANCE IN MEDICINE

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ISMRM WORKSHOP ON MR Safety: From Science to Clinical Practice

Endorsed by the American Association of
Physicists in Medicine (AAPM)

24-26 SEPTEMBER 2025

Physikalisch-Technische Bundesanstalt (PTB)
Berlin, Germany



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Titti Owman, R.N.(R)(CT)(MR)FSMRT
Lund University Hospital
Lund, Sweden

SPEAKER UPLOAD INFORMATION

- Wednesday, 24 September 2025 07:30-08:30
- Thursday, 25 September 2025 07:30-08:35
- Friday, 26 September 2025 07:30-08:35

PROGRAM CREDIT DESIGNATION

The International Society for Magnetic Resonance in Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The International Society for Magnetic Resonance in Medicine designates this live activity for a maximum of 6.50* *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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Workshop Program

Day 1: Wednesday, 24 September 2025 (2.75 CME Available)

07:30	Registration & Speaker Upload Available	
08:30	Welcome & Opening Statement	
Session 1: Physics & Physiology of MR Safety (No CME Available) Location: Hermann von Helmholtz Building		
Moderators: Titti Owman, R.N.(R)(CT)(MR)FSMRT & Lukas Winter, Ph.D.		
08:40	Static Magnetic Field B0	Mark E. Ladd, Ph.D. German Cancer Research Heidelberg, Germany
09:05	Gradients	Lawrence Wald, Ph.D. Massachusetts General Hospital Charlestown, MA, USA
09:30	RF Fields	Christopher M. Collins, Ph.D. New York University New York, NY, USA
09:55	Implants	Harald Quick, Ph.D. Erwin L. Hahn Institute for Magnetic Resonance Imaging Essen, Germany
10:20	Break & Speaker Upload Available	
Session 2: MR Safety in Pediatrics & Obstetrics Location: Hermann von Helmholtz Building		
Moderators: Johan Kihlberg, Ph.D., R.N.(R) & Filiz Yetisir, Ph.D.		
10:50	Clinical Perspective	Michael Kean, FISMRT, M.Sc. Royal Children's Hospital Parkville, VIC, Australia
11:10	Pediatric Patients	Laleh Golestani Rad, Ph.D. Northwestern University Evanston, IL, USA
11:30	MR Safety in Pediatrics & Obstetrics: Scanning in Pregnancy	Penny Gowland, Ph.D. University of Nottingham Nottingham, England, UK
Session 3: Power Pitches Location: Hermann von Helmholtz Building		
Moderators: Johan Kihlberg, Ph.D., R.N.(R) & Filiz Yetisir, Ph.D.		
11:50	Power Pitch Session	
	Integrated Implantable Sensor for Simultaneous Measurement of Temperature, Impedance & RF Power in Active Implantable Medical Devices Under MRI	Walid Bouzid, M.Sc. Université de Lorraine Nancy, France
	Evaluating Specific Absorption During Entire Spine Exams at 1.5T & 3T	Taylor Froelich, Ph.D. Mayo Clinic Rochester, MN, USA
	Gradient Field-Induced Vibrations in Active Implantable Medical Devices: Impact of Mechanical Boundary Conditions on Measurement & Safety Threshold Calculation	Diego Julian Gonzalez Soto, Ph.D. Candidate Université de Lorraine Nancy, France
	Assessing Radio-Frequency Safety of Wire-Like AIMDs by Measuring Induced RF Currents Using MRI	Chiara Hartmann, Ph.D. Candidate Université Grenoble Alpes Grenoble, France
	MRI in Patients with a Vascular Stent: Guideline in The Netherlands	Mark Hofman, Ph.D. Amsterdam University Medical Center Amsterdam, The Netherlands
12:20	Lunch & Speaker Upload Available Poster Viewing & Open-Source Showcase	

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Session 4: Implant Safety (No CME Available) Location: Hermann von Helmholtz Building		
Moderators: Kyoko Fujimoto, Ph.D., RAC & Michael Steckner, Ph.D., M.B.A.		
14:00	<i>RF Induced Heating in Implants: Standards Perspective</i>	Jonathan Edmonson, B.Sc. Medtronic Minneapolis, MN, USA
14:25	<i>Gradient Induced Effects with Large Passive Implants</i>	Luca Zilberti, Ph.D. Istituto Nazionale di Ricerca Metrologica Turin, Italy
14:50	<i>Imaging-Based Methods to Detect & Suppress Implant Heating</i>	Yigitcan Eryaman, Ph.D. University of Minnesota Minneapolis, MN, USA
15:15	<i>Smart Implants & Parallel Transmission MRI</i>	Berk Silemek, Ph.D. Physikalisch-Technische Bundesanstalt Berlin, Germany
15:40	Break & Speaker Upload Available	

Session 5a: MRI Safety in Clinical Practice Location: Anna von Helmholtz Building			Session 5b: Open-Source & Free Resources in MR Safety Location: Hermann von Helmholtz Building		
Moderators: Boel Hansson, Ph.D., R.T.(R)(CT)(MR) & Penny Gowland, Ph.D.			Moderators: Andrew Webb, Ph.D. & Lukas Winter, Ph.D.		
16:10	<i>Patient/Clinical Management of MRI Safety</i>	Heidi Edmonson, Ph.D., DABR, FACR Mayo Clinic Rochester, MN, USA	16:10	<i>EM/Thermal Simulation</i>	Riccardo Lattanzi, Ph.D. New York University Langone Health New York, NY, USA
16:35	<i>Incident Reporting in MRI</i>	Johan Kihlberg, Ph.D., R.N.(R) Linköping University Hospital Linköping, Sweden	16:35	<i>The STASIS Open-Source RF Exposition System</i>	Stephan Orzada, Ph.D. German Cancer Research Center Heidelberg, Germany
17:00	<i>Recent Outreach Educational Activities from the ISMRM Safety Committee</i>	Emre Kopanoglu, Ph.D. CUBRIC Cardiff, Wales, UK	17:00	<i>OSI² ONE Open-Source Reference Low-Field MRI Scanner</i>	Christoph P. Kolbitsch, Ph.D. Physikalisch-Technische Bundesanstalt Berlin, Germany
17:25	Adjourn				
18:00	Networking Reception				

Day 2: Thursday, 25 September 2025 (2.75 CME Available)		
07:30	Registration & Speaker Upload Available	
08:35	Welcome & Housekeeping	
Session 6: RF Safety Limits Location: Hermann von Helmholtz Building		
Moderators: Christopher Collins, Ph.D. & Tolga Goren, Ph.D.		
08:40	Local SAR vs. Whole-Body SAR Limits	Thomas Fiedler, Ph.D. German Cancer Research Center Heidelberg, Germany
09:05	Body Models	Bryn Lloyd, Ph.D. IT'IS Foundation Zurich, Switzerland
09:30	RF Safety Procedures Revisited	Frank Seifert, Ph.D. Physikalisch-Technische Bundesanstalt Berlin, Germany
09:55	B1+ RMS	Michael Steckner, Ph.D., M.B.A. MKS Consulting Beachwood, OH, USA
10:20	Break & Speaker Upload Available	

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Session 7: Patient Specific (RF) Safety Models (No CME Available) Location: Hermann von Helmholtz Building		
Moderators: Laleh Golestani Rad, Ph.D. & Johan van den Brink, Ph.D.		
10:50	AI-Based SAR Prediction	Ettore Flavio Meliaddò, Ph.D. University Medical Center Utrecht Utrecht, The Netherlands
11:15	Predicting RF-Induced Implant Heating Using Deep Learning	Ji Chen, Ph.D. University of Houston Houston, TX, USA
11:40	Deep Learning Based Local SAR Prediction	Alexander Raaijmakers, Ph.D. Eindhoven University of Technology Eindhoven, The Netherlands
Session 8: Power Pitches (No CME Available) Location: Hermann von Helmholtz Building		
Moderators: Laleh Golestani Rad, Ph.D. & Johan van den Brink, Ph.D.		
12:05	Power Pitch Session	
	A Novel Conductive Cap Design to Mitigate RF-Induced Heating in Abandoned Cardiac Device Leads	Kagayaki Kuroda, Ph.D. Tokai University School of Information Science & Technology Hiratsuka, Japan
	Deep Brain Stimulation (DBS) Devices in MRI: Challenges, Protocols & Solutions	Vitor Lima, B.Sc.(MR), MRSC (MRSC) Geneva University Hospital Geneva, Switzerland
	Comparing SAR Simulations & Measurements	Hendrik Paysen, Ph.D. Siemens Healthineers Erlangen, Germany
	A Novel Incident Field Metric for RF-Induced Heating of Medical Implants During MR Examination	Aiping Yao, Ph.D. Nanchang University Nanchang, China
	Effect of Realistic Fetal Motion on Fetal SAR	Filiz Yetisir, Ph.D. Boston Children's Hospital Boston, MA, USA
12:35	Lunch & Speaker Upload Available Poster Viewing & Open-Source Showcase	
Session 9: Panel Discussion on Remote Scanning Location: Hermann von Helmholtz Building		
Moderators: Maureen Hood, Ph.D. & Jeff Jahn, BAS, RT (R), (MR), (MRSC) (MRSC™)		
14:00	Beyond the Walls: Unpacking Remote MRI's Potentials, Pitfalls, Fears & Needs	Maureen Hood, Ph.D. Uniformed Services University Bethesda, MD, USA
14:10	Remote Scanning from a Clinical Perspective (Technologist)	Neil Huber, M.B.A., RT(R)(MR) Alpha RT Coral Springs, FL, USA
14:20	Remote Scanning from a Manufacturer Perspective	Tim Eagan, Ph.D. GE HealthCare Milwaukee, WI, USA
14:30	Remote Scanning from a Standardization Perspective	Johan van den Brink, Ph.D. Philips Healthcare Best, The Netherlands
14:40	Remote Scanning from a Clinical Perspective (Radiologist)	Walter Wohlgemuth, M.D., Ph.D. University Clinic & Policlinic of Radiology Augsburg, Germany
14:50	Panel Discussion	
15:40	Break & Speaker Upload Available	

ISMRM Workshop on MR Safety: From Science to Clinical Practice

Session 10a: MRI Safety in Clinical Practice <i>Location: Anna von Helmholtz Building</i>			Session 10b: Temperature Mapping & Interventional MRI <i>Location: Hermann von Helmholtz Building</i>		
Moderators: Heidi Edmonson, Ph.D., DABR, FACR & Michael Kean, FISMRT, M.Sc.			Moderators: Alexander Raaijmakers, Ph.D. & Mingming Wu, M.D., Ph.D.		
16:10	Scanning Patients with Implanted Devices: A Day in the Life of an MRI Radiographer	Vera Kimbrell M.Ed. Forsyth Technical Community College Salem, NC, USA	16:10	In Vivo MR Thermometry in Thermal Therapies	Jason Stafford, Ph.D. University of Texas MD Houston, TX, USA
16:35	Clinical UHF Safety at 7T	Oliver Kraff, Ph.D. Erwin L. Hahn Institute for Magnetic Resonance Imaging Essen, Germany	16:35	In Vivo Temperature Mapping in MRI	Mathijs Kikken, Ir. University Medical Center Utrecht Utrecht, The Netherlands
17:00	Contrast Agent Safety	Scott B. Reeder, M.D., Ph.D. University of Wisconsin Madison, WI, USA	17:00	Safety Considerations for Interventional MR Systems	Michael Bock, Ph.D. University Hospital Freiburg Freiburg, Germany
17:25	Adjourn				
19:00	Networking Dinner				

Day 3: Friday, 26 September 2025 (1.0 CME Available)		
07:30	Registration & Speaker Upload Available	
08:35	Welcome & Housekeeping	
Session 11: Low-Field MR Safety (No CME Available) Location: Hermann von Helmholtz Building		
Moderators: Christoph Kolbitsch, Ph.D. & Lawrence Wald, Ph.D.		
08:40	MR Safety at Mid-Field (0.55-0.6T)	David Gross, Ph.D. MED Institute Inc. West Lafayette, IN, USA
09:05	Are Implants at 0.55-.06T Safer?	Tolga Goren, Ph.D. IT'IS Foundation Zurich, Switzerland
09:30	Low-Field (50mT) MR Safety in the Research Setting	Andrew Webb, Ph.D. Leiden University Medical Center Leiden, The Netherlands
09:55	Portable Low-Field in the Clinic/Low-Resource Settings	Rui Pedro Azeredo Gomes Teixeira, Ph.D. Hyperfine Inc. Guilford, CT, USA
10:20	Break & Speaker Upload Available	
Session 12: UHF MR Safety (No CME Available) Location: Hermann von Helmholtz Building		
Moderators: Yigitcan Eryaman, Ph.D. & Sebastian Schmitter, Ph.D.		
10:50	Clinical pTX at 7T	Matthias Gebhardt, Dipl.Phys. Siemens Healthineers AG Erlangen, Germany
11:15	In Vivo Experiences at the Highest MR Fields B0=11.7T	Caroline Le Ster, Ph.D. CEA-Neurospin Gif-sur-Yvette, France
11:40	14 T: Safety Concerns & Beyond	Aart Nederveen, Ph.D. Amsterdam University Medical Center Amsterdam, The Netherlands

Session 13: Gradients <i>Location: Hermann von Helmholtz Building</i>		
Moderators: Bernd Ittermann, Ph.D. & Oliver Speck, Ph.D.		
12:05	<i>PNS & Cardiac Stimulations Thresholds Revisited</i>	Valerie Klein, Ph.D. Harvard Medical School, Massachusetts General Hospital Boston, MA, USA
12:30	<i>Peripheral Nerve Simulation on (PNS) & Gradient-Cryostat Interaction (GC): Two MR Safety Concerns that can be Mitigated by Intelligent Gradient Design</i>	Brian Rutt, Ph.D. Stanford University Stanford, CA, USA
12:55	Closing Statements & Reflections	
13:10	<i>Boxed Lunch & Adjournment</i>	

Posters

POSTER	TITLE	AUTHOR
1	<i>MR Conditional Labeling for Implants with Multiple Anatomical Indications: How Can B1+RMS Help?</i>	Grant Baker, M.S.E. MED Institute Inc. West Lafayette, IN, USA
2	<i>Integrated Implantable Sensor for Simultaneous Measurement of Temperature, Impedance & RF Power in Active Implantable Medical Devices Under MRI</i>	Walid Bouzid, M.Sc. Université de Lorraine Nancy, France
3	<i>Methodology for Measuring RF Input Impedance of MRI-Conditional Pacemaker Systems: Leads & Implantable Pulse Generators</i>	Walid Bouzid, M.Sc. Université de Lorraine Nancy, France
4	<i>Strong Utilisation of a National E-Learning Programme for MRI Safety</i>	Geoff Charles-Edwards, Ph.D. Royal Marsden NHS Foundation Trust London, England, UK
5	<i>Optimization & Application of MP2RAGE Sequence for T1-Based Thermometry In Vivo Fatty Tissues</i>	Koen Custers, M.Sc. Eindhoven University of Technology Eindhoven, The Netherlands
6	<i>Use of a Head Transmit Coil Reduces RF-Heating of Implants Below the Neck</i>	Luisa Fleig, Ph.D IT'IS Foundation Zurich, Switzerland
7	<i>Evaluating Specific Absorption During Entire Spine Exams at 1.5T & 3T</i>	Taylor Froelich, Ph.D. Mayo Clinic Rochester, MN, USA
8	<i>B1+ Homogeneity Metric for Implant Safety Assessment</i>	Carina Fuss, M.Sc. IT'IS Foundation Zurich, Switzerland
9	<i>The Applicability of Implants' MR Conditional RF-Based Safety Limits of Standard Knee Coils to Siemens Inductively Coupled (iTX) Knee Coils</i>	Matthias Gebhardt, Dipl.Phys. Siemens Healthineers AG Erlangen, Germany
10	<i>Maximal Exceedances of E_{tan}^2 on Implant Leads & Local SAR of Two-Channel RF Transmit (MC-2) Operation Compared to Clockwise & Counterclockwise CP Modes</i>	Matthias Gebhardt, Dipl.Phys. Siemens Healthineers AG Erlangen, Germany
11	<i>Introduction of Bootstrapping Methodology on Verifying Prediction Models for MRI RF-Induced Heating</i>	Wolfgang Goertz, Dipl.Phys. MRI-StaR GmbH Gelsenkirchen, Germany
12	<i>Characterization of Gradient Field-Induced Vibrations in Implantable Medical Devices: A Combined Experimental & Simulation Study</i>	Diego Julian Gonzalez Soto, Ph.D. Candidate Université de Lorraine Nancy, France
13	<i>Gradient Field-Induced Vibrations in Active Implantable Medical Devices: Impact of Mechanical Boundary Conditions on Measurement & Safety Threshold Calculation</i>	Diego Julian Gonzalez Soto, Ph.D. Candidate Université de Lorraine Nancy, France
14	<i>Assessing Radio-Frequency Safety of Wire-Like AIMDs by Measuring Induced RF Currents Using MRI</i>	Chiara Hartmann, Ph.D. Candidate Université Grenoble Alpes Grenoble, France
15	<i>MRI in Patients with a Vascular Stent: Guideline in The Netherlands</i>	Mark Hofman, Ph.D. Amsterdam University Medical Center Amsterdam, The Netherlands
16	<i>Incorporating Bioheat Simulation with In-Vitro In Vivo Translation of RF-Induced Heating for Passive Implant Medical Devices</i>	Zainul Ihsan, Ph.D. MR:Comp GmbH Gelsenkirchen, Germany
17	<i>Challenges Associated with MRI Safety & Patient Screening in Pediatric Setup</i>	Ayaz Khan, Ph.D. Lurie Children Hospital Chicago Chicago, IL, USA
18	<i>MRI Safety & Compatibility Assessment of Graphene-Based Electrophysiological Arrays at 7 Tesla</i>	Suchit Kumar, Ph.D. University College London London, England, UK
19	<i>A Novel Conductive Cap Design to Mitigate RF-Induced Heating in Abandoned Cardiac Device Leads</i>	Kagayaki Kuroda, Ph.D. Tokai University School of Information Science & Technology Hiratsuka, Japan

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POSTER	TITLE	AUTHOR
20	<i>Deep Brain Stimulation (DBS) Devices in MRI: Challenges, Protocols & Solutions</i>	Vitor Lima, B.Sc.(MR), MRSO (MRSC) Geneva University Hospital Geneva, Switzerland
21	<i>Effects of Tissue Interfaces on MR Heating in Phantoms with Two Tissues: Experimental & Numerical Investigations</i>	Maira Martins-Garcia, M.Sc. University of Duisburg-Essen (UDE) & Westphalian University Duisburg, Germany
22	<i>Implications on Permitted RF Power in UHF MRI Under Consideration of the Extremities</i>	Franziska Masuch, B.Sc. German Cancer Research Center (DKFZ) Heidelberg, Germany
23	<i>MRI Safety of a Deep Brain Stimulation Device at 3T: Impact of Brain Conductivity</i>	Guillaume Paillart, Ph.D. Student Université de Lorraine Nancy, France
24	<i>MR Acoustic Noise Variations Across Magnetic Fields, Bore Sizes & Gradient Strengths</i>	Anshuman Panda, Ph.D. Mayo Clinic Phoenix, AZ, USA
25	<i>Comparing SAR Simulations & Measurements</i>	Hendrik Paysen, Ph.D. Siemens Healthineers Erlangen, Germany
26	<i>Monitoring Head Exposure to Static Magnetic Field Around a 3T MRI Scanner During Six Typical Situations</i>	Thomas Quirin, M.Sc. University of Applied Sciences & Arts Northwestern Switzerland Windisch, Switzerland
27	<i>Braided Venous Stents: RF-Induced Heating as a Function of Expansion Length</i>	Lisa Regler, M.Sc. University of Freiburg Freiburg, Germany
28	<i>Prompt Engineering Strategies for Improving the Accuracy of AIMD MRI Safety Evaluations with Zero-Shot Prompting of Publicly Available Generative AI</i>	Jeremiah Sanders, Ph.D. Mayo Clinic Phoenix, AZ, USA
29	<i>Breast MRI in the Prone Position: Impact on RF-Induced Heating of Active Implantable Medical Devices</i>	Aiping Yao, Ph.D. Nanchang University Nanchang, China
30	<i>A Novel Incident Field Metric for RF-Induced Heating of Medical Implants During MR Examination</i>	Aiping Yao, Ph.D. Nanchang University Nanchang, China
31	<i>Effect of Realistic Fetal Motion on Fetal SAR</i>	Filiz Yetisir, Ph.D. Boston Children's Hospital Boston, MA, USA

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