Registration:

Course fee (+10% after early booking deadline, 4 weeks before course) Attendance option	USD	Please select ⇩
"Medical Device MRI Safety Specialist*" **"Full Tilt"** 13, 14, 15 June 2024 (Lectures & MRI hands-on):	2,495	
"Listen & Watch" 13, 14, 15 June 2024 (Lectures only & MRI hands-on for onlooker)	2,295	

Title, First name, Name

Function title

Organization

Street, Number

City, Zip-code

Telephone, Fax

Email

Land / Country

Date, Signature

Please send your registration to:
MRI-STaR GmbH
Fax: +49 209 1497730 88
Email: seminar@mri-star.com

Information:

Terms of payment:

The amount is due for payment 2 weeks after receipt of the invoice. The course fee must be paid via wire transfer, check or via credit card. Information is provided in separate invoice. Credit card information please provide here via fax:

☐ Visa ☐ MasterCard ☐ AMEX
Credit card # _____ Name of card holder _____
valid until date_____

Discounts:

20% discount on regular price for ONLINE participation.
Every 2nd and further registrant from the same organization applies for a 5% discount on top.

Registration is valid only with receipt of confirmation and payment of the course fee. Early booking deadline: 4 weeks before the course date.

A cancellation is free of charge up to 6 weeks before the course date. After that date we charge 50% of the registration fee. For a cancellation within the last 7 days 80% are charged of the course fee. If the cancellation takes place later or the participant or a backup does not attend in the course, we are entitled to deduct the full participation fee.

The course fee includes: certificate "Medical Device MR Safety Specialist", script, confirmation of participation, breakfast snack, lunch, dinner, hot and cold drinks.

The number of participants is limited. The places will be assigned in sequence of the receipt of registrations. MRI-STaR reserves the right to offer an alternative seminar date, if the number of participants is too low or too high.

Seminar location:

Georgetown University Medical Center
3900 Reservoir Road NW
SW107 Medical/Dental Building
Washington DC, 20057
USA

We would be pleased to welcome you as attendee!

MRI-STaR
Magnetic Resonance Institute for Safety, Technology and Research

online & on-site

Hands-on MR Seminar

EST Time Zone

The "Medical Device MR Safety Specialist" (MRSS)

Magnetic Resonance Imaging
MR Safety and Compatibility of Medical Devices

June 13-15, 2024

Organizer

MRI-STaR GmbH
www.mri-star.com

Host:
Prof. Ashley VanMeter, Ph.D.

In cooperation with MR comp www-mrcomp.com

MRI-STaR MRSS Seminar Day 1:

08:00	**08:15**	**Welcome reception with breakfast**	
08:15	**08:45**	**Introduction**	Sch
08:45	**09:00**	**Virtual visit of the MR system**	Kug
09:00	**10:30**	**Basics of MR physics and technical aspects** - Static mag. field, RF-Field, Gradient-field - MR components - Refresh of the physical principle - Physics of MRI (spin, magnetization, MR signal) - MR image acquisition (RF pulse sequences, gradients, geometry, signal to noise and contrast, contrast agents) - MR Imaging techniques (fast imaging, Perfusion. Diffusion, Spectroscopy)	Kug
10:30	**10:45**	**Grab a Coffee**	
10:45	**12:15**	**Significant hazards MRI I** system-specific (MR safety, the MR system and the MR worker – IEC 60601-2-33) - General terms - Presentation of hazards - Technology of superconductivity and potential risks of cryogens - Laser	Ste
12:15	**13:15**	**Lunch break**	
13:15	**14:45**	**MR safety and compatibility of medical devices (and items) I / Significant hazards MRI II** item-specific - Interactions of items (incl. implants) within the MR environment (static mag.field, switched gradient and RF field) - Current technical standards & guidance, MR testing methods	Sch
14:45	**15:00**	**Coffee break**	
15:00	**16:00**	**MR safety instruction/**Hands on preparation	Kug
16:00	**18:00**	**Hands-on: MR basics** - Preventive measures and safety in the MR environment (staff & items) - Basic MR imaging: Sequence selection, planning geometry and contrast - MR Imaging: image quality, artifacts	Sch Kug
18:00	**open**	**Final discussion with snack**	

Program is subject to changes

MRI-STaR MRSS Seminar Day 2:

09:00	**09:15**	**Breakfast**	
09:15	**10:45**	**Computational methods, RF-safety & implants** - Research & Trends related to MR safety - Numerical simulation and modeling	Zyl webex
10:45	**11:00**	**Coffee break**	
11:00	**12:00**	**The Anatomy of modern Gradient Systems & its related Safety Aspects**	Schm webex
12:00	**12:15**	**Grab a coffee**	
12:15	**13:00**	**Hands-on: MR Safety** - RF-induced heating experiment	Sch
13:00	**14:00**	**Lunch break**	
14:00	**14:50**	**MRI from a clinical view I** - Diagnostics & Therapy - Surgery & Interventions (Biopsy, Ablation (RF, Laser), etc.)	Mel webex
14:50	**15:00**	**Grab a Coffee**	
15:00	**15:35**	**MRI from a clinical view II** - Robotics, Navigation, Visualization of implants and Instruments	Mel
15:35	**16:00**	**Coffee break/Transfer to scanner**	
16:00	**17:30**	**Hands on: MR interventions** - Your first MR-guided biopsy - Learn about workflow and technique	Sch Mel
17:30	**18:00**	**Discussion**	
18:30	**open**	**Get together dinner**	

Target audience:

The seminar is especially designed for the **MR safety technical** interests of **auditors and quality/regulatory affairs managers, product and sales managers, R&D managers/engineers/physicists.**

The seminar language is English. Each hands-on participant should become qualified for basic MR imaging, understanding the MR interactions and applying required safety precautions in the MR environment.

The seminar will be held together with the separate course "MR Safety Expert" (MRSE) for MRI users

TIME SLOTS in Eastern Standard Time (EST)

MRI-STaR MRSS Seminar Day 3:

08:15	**08:30**	**Breakfast**	
08:30	**09:45**	**MR safety and compatibility of medical devices (and items) II** - Finding the "worst-case" - Labeling of devices for the MR environment	Sch
09:45	**10:00**	**Coffee break**	
10:00	**11:00**	**Practical training: Behavioral measures in MR routine (Implant labeling research)** - Implant research - Case studies	Sch
11:00	**11:15**	**Coffee break**	
11:15	**12:45**	**Assessment of MR safety for patients with implantable medical devices** - ISO/TS 10974: Requirements for active implantable medical devices - Potential physical relevance for passive dev	Ste
12:45	**13:00**	**Grab a coffee/snack**	
13:00	**13:30**	**Edition 4 and 10974 content updates**	Ste
13:30	**13:40**	**Coffee break**	
13:40	**14:25**	**Guest lecture: FDA Regulatory Aspects on MR Safety, Testing, and Labeling of medical devices**	Kai webex
14:25	**15:00**	**Discussion/Multiple-Choice-Test/End**	

Lecturers:

Prof. Dr. rer. nat. W. Zylka
Westphalia University, Campus Gelsenkirchen, Germany

Dr. rer. nat. H. Kugel
University Clinic for Radiology, University of Munster, Germany

Prof. A. Melzer, M.D., DDS
Institute for Medical Science and Technologies IMSaT, Universities Dundee & St. Andrews, United Kingdom

M. Steckner, Ph.D. MBA
MKS Consulting, USA

Wolfgang Kainz, PhD
CEO & President, High Performance Computing for MRI Safety, LLC, USA

Dipl.-Phys. F. Schmitt
MR-Consultant, MR:Comp, former VP Gradient Systems & Director Ultra Highfield Imaging at Siemens Healthcare, Erlangen, Germany

G. Schaefers, Dipl.-Ing. (FH)
MR Safety Testing Laboratory, MR:comp GmbH, Gelsenkirchen, Germany