

Registration:

Course fee (+10% after early booking deadline, 4 weeks before course)	USD	Please select
Attendance option		↓
"Medical Device MRI Safety Specialist" "Full Tilt" 23, 24, 25 Feb 2023 (Lectures & MRI hands-on):	2,495	
"Listen & Watch" 23, 24, 25 Feb 2023 (Lectures only & MRI hands-on for onlooker)	2,295	
Online	1,995	

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:

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", hand out, 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:

Lucas Center
Stanford University
1201 Welch Road
Stanford, CA
94305 USA

We would be pleased to welcome you as attendee!



MRI-STaR

Magnetic Resonance Institute
for Safety, Technology and Research

on-site & online Hands-on MR Seminar

in
Stanford, Bay Area

The "Medical Device MR Safety Specialist" (MRSS) Magnetic Resonance Imaging MR Safety and Compatibility of Medical Devices

February 23-25, 2023

Organizer

MRI-STaR GmbH
www.mri-star.com

Host:

Karla Epperson, RT(MR)(ARMRIT)

In cooperation with  www-mrcomp.com

 **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 cryogenes - Laser	Eng
12:15	13:15	Lunch break	
13:15	14:00	MR safety instruction/Hands on preparation	Kug
14:00	16:00	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
16:00	16:30	Coffee break/back to conference room	Kug
16:30	18:15	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
18:15	open	Final discussion with snack	

Program is subject to changes

 **MRSS Seminar Day 2:**

08:00	08:15	Breakfast	
08:15	09:45	Computational methods, RF-safety & implants - Research & Trends related to MR safety - Numerical simulation and modeling	Zyl webex
09:45	10:00	Coffee break	
10:00	11:00	The Anatomy of modern Gradient Systems & its related Safety Aspects	Schm webex
11:00	11:10	Grab a coffee	
11:10	12:00	MRI from a clinical view I - Diagnostics & Therapy - Surgery & Interventions (Biopsy, Ablation (RF, Laser), etc.)	Mel
12:00	12:10	Grab a coffee	
12:10	12:45	MRI from a clinical view II - Robotics, Navigation, Visualization of implants and Instruments	Mel
12:45	14:00	Lunch break/transfer to scanner	
14:00	16:00	Hands on: MR interventions - Your first MR-guided biopsy - Learn about workflow and technique	Mel Sch
16:00	16:30	Coffee break/back to conference room	
16:30	17:15	Hands-on: MR Safety - RF-induced heating experiment	Sch
17:15	17:30	Discussion	
18:15	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 Pacific Standard Time (PST)

 **MRSS Seminar Day 3:**

08:00	08:15	Breakfast	
08:15	09:30	MR safety and compatibility of medical devices (and items) II - Finding the "worst-case" - Labeling of devices for the MR environment	Sch
09:30	09:45	Coffee break	
09:45	10:45	Practical training: Behavioral measures in MR routine (Implant labeling research) - Implant research - Case studies	Sch
10:45	11:00	Coffee break	
11:00	11:45	Scanning of active implants	Pan
11:45	12:00	Grab a coffee/snack	
12:00	13:45	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.	Eng
13:45	14:00	Coffee break	
14:00	14:45	Guest lecture: FDA Regulatory Aspects on MR Safety, Testing, and Labeling of medical devices	Kai webex
14:45	15:30	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

H. Engels, Ph.D.
MR Safety Consultant, MR:comp and former MR Safety Director Philips Healthcare, The Netherlands

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

Anshuman Panda, Ph.D.
Medical Physicist, Mayo Clinic, Phoenix, USA

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

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