

Registration:

Course fee	EUR plus 19% VAT	Please select
Attendance option <small>*Slang titles as homage to our historical coal mining area Ruhrgebiet called „Ruhrpott“ with its characteristic slang</small>		↓
“Medical Device MRI Safety Specialist”* “Volle Kanne*/Full Tilt” 16/17/18 Mar 2023 (Lectures & MRI hands-on):	1895	
Online 16/17/18 Mar 2023	1515	

Title, First name, Name

Function title

Organisation

Street, Number

City, Zip-code

Telephone, Fax

Email

Country

Date, Signature

Information:

Terms of payment:

The amount is due for payment 2 weeks after receipt of the invoice. The course fee must be paid to the following bank account or via CREDIT CARD:

Bankname: Sparkasse Gelsenkirchen
Konto-Nr. / Account No.: 160 158 060
BLZ / Bank Code Number 420 500 01

Discounts:

Students, employees of universities and employees of start-up companies (<3 years) qualify for a 20% discount. Please send in a copy of an appropriate certificate proving your status. Every 2nd and further registrant from the same organization applies for a 15% discount.

***only 1 discount applicable!**

Registration is valid only with receipt of confirmation and payment of the course fee.

A cancellation is up to 6 weeks before free of charge. 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 the course, we are entitled to deduct the full participation fee.

The course fee includes: script, certificate* “Medical Device MR Safety Specialist”, 3 x breakfast snack, 2 x lunch, 1 x dinner and hot as well as 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.



On-site & online Hands-on MR course

Seminar location

MRI-STaR GmbH
Conference room
Buschgrundstr. 23, 45894 Gelsenkirchen, Germany
CEST TIME ZONE

The “Medical Device MR Safety Specialist” Magnetic Resonance Imaging - MR Safety and Compatibility of Medical Devices

16, 17 & 18 March 2023

Organizer

MRI-STaR GmbH & MR:comp GmbH
www.mri-star.com
Buschgrundstr. 23
45894 Gelsenkirchen, Germany

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

We would be pleased welcoming you as attendee!

In cooperation with: 

MRI-STaR Seminar Day 1:	MRI-STaR Seminar Day 2:	MRI-STaR Seminar Day 3:
08:45 - 09:00 Welcoming / Breakfast	09:00 - 09:15 Breakfast	08:30 - 08:45 Breakfast
09:00 – 09:30 Introduction	09:15 - 10:15 The Anatomy of modern Gradient Systems & its related Safety Aspects (Schmitt) <i>webex</i>	08:45 - 10:00 MR safety and compatibility I I(Schaefers) of medical devices (and items)
09:30 - 09:45 Virtual visit of the MR system (Kugel)	10:15 - 10:30 Coffee break	- Finding the “worst-case” - Labeling of medical devices for the MR environment
09:45 - 11:15 Basics of MR physics and technical aspects I (Kugel) - Static magnetic field, RF-Field, Gradient-field - MR system components - Refresh of the physical principle - Physics of MRI (spin, magnetization, MR signal) - MR image acquisition (RF pulse sequences, gradients, geometry, signal to noise & contrast, contrast agents) - MR Imaging techniques (fast imaging, perfusion, diff.)	10:30 - 11:15 Hands on: MR Safety (Görtz) - RF-induced heating Experiment	10:00 - 10:15 Coffee break
11:15 - 11:30 Coffee break	11:15 - 11:30 Coffee break	10:15 - 11:15 Practical training: Behavioral measures in MR routine (Implant labeling research) (Schaefers) - Implant research - Case studies
11:30 - 12:00 Safety Instruction (Kugel)	11:30 - 13:00 Computational methods, RF-safety & implants (Zylka) - Research & Trends related to MR safety - Numerical simulation and modeling	11:15 - 11:30 Coffee Break
12:00-12:10 Grab a coffee	13:00 - 14:00 Lunch break	11:30 - 12:50 Assessment of MR safety for patients with active implantable med. devices (Engels) - ISO/TS 10974: Requirements for active implantable medical devices - Potential physical relevance for passive devices
12:10-13:45 Significant hazards MRI II (MR safety, the MR system and the MR worker – IEC 60601-2-33) (Engels) - General terms - Presentation of hazards - Technology of superconductivity and potential risks of cryogenes - Laser	14:00 - 15:00 MRI from clinical view I (Melzer) <i>webex</i> - Diagnostics & Therapy - Surgery & Interventions (Biopsy, Ablation (RF, Laser), etc.)	12:50 - 13:20 FDA Regulatory Aspects on MR Safety, (Kainz) Testing, and Labeling of med. devices <i>webex</i>
13:45 - 14:30 Lunch break	15:00 - 15:10 Coffee break	13:20 - 13:50 Multiple Choice Test /Discussion & Farewell
14:30 - 16:00 MR safety and compatibility I (Schaefers) of medical devices (and items) Significant hazards MRI I item-specific - Interactions of items (incl. implants) within the MR environment (static magnetic field, switched gradient and RF field) - Current technical standards & guidance, MR testing methods	15:10 - 15:50 MRI from clinical view II (Melzer) <i>webex</i> - Robotics, Navigation, Visualization of implants and instruments	Lecturers:
16:00 – 16:30 Coffee break/Transfer to scanner	15:50 - 16:30 Coffee break/ Transfer to scanner	Prof. Dr. rer. nat. W. Zylka Westfälische Hochschule, University of Applied Sciences, Germany
16:30-18:30 Hands-on: MR basics (Kug./Sch.) - Preventive measures and safety in the MR environment (staff & items) - Hands-on, Basic MR imaging: Sequence selection, planning geometry and contrast - MR imaging: image quality, artifacts	16:30 - 18:30 Hands on: MR intervention (Melzer) - Your first MR-guided puncture of a tumor phantom - Learn about the difficulties in technique	Dr. rer. nat. H. Kugel Institute for Clinical Radiology, University of Munster, Germany
18:30-19:00 Final discussion with snack	18:30 - open end Final discussion & Get together dinner	Prof. Dr. med. A. Melzer Institute for Medical Science and Technologies IMSaT, Universities Dundee & St. Andrews, United Kingdom
	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, MR clinicians, MR physicists.	Dr. rer. nat. H. Engels MR Safety Consultant, MR:comp and former MR Safety Director Philips Healthcare, The Netherlands
	The seminar language is English. For a German-speaking seminar, please send us your request.	Dipl.-Phys. W. Görtz Senior Physicist, MRI-STaR GmbH, Gelsenkirchen, Germany
		Dipl.-Phys. F. Schmitt MR-Consultant, MR:Comp, former VP Gradient Systems & Director Ultra Highfield Imaging at Siemens Healthcare, Erlangen, Germany
		Wolfgang Kainz, PhD CEO & President, High Performance Computing for MRI Safety, LLC, USA
		Dipl.-Ing. (FH) G. Schaefers MR Safety Testing Laboratory, MR:comp GmbH, Gelsenkirchen, Germany