

## Registration:

Course fee (+10% after early booking deadline, 4 weeks before seminar)	USD	Please select ↓
Attendance option		
"MR Safety Expert" 13, 14, 15 June 2024 physicists / physicians (Lectures & MRI hands-on):	1,890	
"MR Safety Expert" 13, 14, 15 June 2024 technologists / radiographers (Lectures & MRI hands-on):	1,390	

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Date, Signature

Please send your registration to:  
MRI-STaR GmbH  
Fax: +49 209 1497730 88  
Email: [seminar@mri-star.com](mailto: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 2<sup>nd</sup> 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 seminar date.

A cancellation is free of charge up to 6 weeks before the seminar 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: MRI-STaR certified MRSE exam, certificate, 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 "MR Safety Expert" (MRSE)

acc. to ABMRS Syllabus, DIN 6876-1, OENORM  
1125-1/2, Dutch/MHRA/RANZCR Guidelines

## June 13-15, 2024

### Organizer

MRI-STaR GmbH  
[www.mri-star.com](http://www.mri-star.com)

### Host:

Prof. Ashley VanMeter, Ph.D.

This course prepares the attendee to sit for the MRSE exam!

In cooperation with  [www.mrcomp.com](http://www.mrcomp.com)

 **MRSE 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	<b>Basics of MR physics and technical aspects</b> - Static mag. 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 and contrast, contrast agents) - MR Imaging techniques (fast imaging, Perfusion, Diffusion, Spectroscopy)	Kug
10:30	10:45	Grab a Coffee	
10:45	12:15	<b>Significant hazards MRI I</b> 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 cryogenics; Laser	Ste
12:15	13:15	Lunch break	
13:15	14:45	<b>MR safety &amp; compatibility of medical devices (and items) I / Significant hazards MRI II</b> 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	Sch
14:45	15:00	Coffee break	
15:00	16:00	MR safety instruction/hands on preparation	Kug
16:00	18:00	<b>Hands-on: Behavioral measures in possible emergency situations for medical personnel, firefighters and for technical staff</b> - General behavior when entering the scanner room - Safety provisions for the MR environment - Magnetic emergency - Electricity failure and fire	Sch Kug
18:00	open	Final discussion with snack	

Program is subject to changes

 **MRSE Seminar Day 2:**

09:00	09:15	Breakfast	
09:15	10:45	<b>Significant hazards MRI III</b> patient-specific - Risks with respect to the static magnetic field - RF field and gradient field - Examples from clinical practice	Kug
10:45	11:00	Coffee break	
11:00	12:00	<b>Significant hazards MRI IV</b> - Contrast agents	Fau webex
12:00	12:10	Grab a Coffee	
12:10	13:30	<b>Behavioral measures in MR routine I</b> - Access control to the scanner room - Patient positioning	Kug
13:30	14:30	Lunch break	
14:30	15:30	<b>Laws, regulations and clinical standards for MR operators</b> - Employee protection - Responsibilities	Fricke
15:30	16:00	Coffee break / Transfer to scanner	
16:00	17:30	<b>Hands-on: Practical demonstrations and exercises</b> - Patient positioning - Medical emergency - Emergency exercises	Sch Kug
17:30	18:00	Discussion	
18:30	open	Get together dinner	

**Target audience:**

The seminar is especially designed for the **MR physicists, technologists/radiographers, MR clinicians.**

The seminar language is English. The MR user will learn about MR safety regulations, standards, measures inside the MR environment. The user will be elevated to be able to organize the MR environment as MR safety responsible expert using the MR safety measures, know-how about SOPs and organization of processes for patients, MR workers and volunteers or other individuals.

**TIME SLOTS in Eastern Standard Time (EST)**

 **MRSE Seminar Day 3:**

08:15	08:30	Breakfast	
08:30	09:45	<b>MR safety and compatibility of medical devices (and items) II</b> - Finding the "worst-case" - Labeling of devices for the MR environment	Sch
09:45	10:00	Coffee break	
10:00	11:00	<b>Hands-on: Behavioral measures in MR routine II (Implant labeling research)</b> - Implant research - case studies	Sch
11:00	11:15	Coffee break	
11:15	12:30	<b>Behavioral measures in MR routine III</b> - Servicing and cleaning operations - Documentation (training, accidents)	Kug
12:30	13:00	<b>MRI-STaR Certificate Examination</b> (Multiple-Choice-Test) for free; <b>Optional:</b> ABMRS additional examination on official MRSE exam date	
13:00	13:30	Final discussion/Farewell	

**Lecturers:**

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

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

**Wm. Faulkner, BS, RT(R)(MR)(CT), FSMRT, MRSC (MRSC)**  
William Faulkner & Associates, LLC, Chattanooga, USA

**S.T. Fricke, Ph.D.**  
Professor of Radiology & Director of Medical Physics, Georgetown University, Washington DC  
MRI Scientist, Children's National Hospital, Washington DC  
CEO, Hyper MC2 LLC, Potomac, Maryland

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

**\*The seminar will be held together with the separate course Medical Device MR Safety Specialist (MRSS)™ for industry participants (est. in 2007).**