Meet Siemens Healthineers

Siemens Healthineers: Our brand name embodies the pioneering spirit and engineering expertise that is unique in the healthcare industry. The people working for Siemens Healthineers are totally committed to the company they work for, and are passionate about their technology. In this section we introduce you to colleagues from all over the world – people who put their hearts into what they do.

Stephan Biber, Ph.D.

Stephan Biber was born in Eichstaett, Germany. From 1996 to 1999, he studied electrical engineering at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) in Germany. After graduating, he moved to the University of Colorado Boulder in the U.S., where he earned an MS in electrical engineering with a focus on remote sensing and high-frequency technology. Stephan then returned to Germany and embarked on doctoral studies, earning his Ph.D. in engineering from FAU in 2005. The following year, he joined Siemens Corporate Technology in Erlangen as a developer of high-frequency electronics and a consultant for sensor systems. From 2006 to 2010, Stephan was a developer for local coil development in Magnetic Resonance Imaging at Siemens Healthcare in Erlangen, working in predevelopment, product development, and project management. Since 2012, he has been a system architect for MRI at Siemens Healthineers. In 2013, he was named Inventor of the Year by Siemens AG, and he was appointed Principle Key Expert for System Architecture at Siemens Healthineers in 2016.



How did you first come into contact with MRI?

After earning my Ph.D. in microwave technology, I started my career at Siemens within Corporate Technology, where my role was partly to work on radio frequency (RF) technology and partly on technology consulting. Half of the time, I was doing predevelopment for MR and this is how I found out that MRI is an extremely cool field to work in. I like the fact that the whole medtech industry is very multidisciplinary: It covers physics, engineering, and medicine, and everything is connected. Soon after starting with Corporate Technology, I became a developer at MR for local coils, leading the development of coils and receive system technology for MAGNETOM Aera and Skyra.

What do you find motivating about your job?

Working with people, seeing the outcome, improving patient care. My colleagues are the biggest asset I have: They are always open for new ideas, everyone shares their thoughts, and we are moving the technology forward together. Nothing can replace this. As an engineer, I just enjoy working with hardware, because I like to see and touch the things that I spend my time and my energy on. Although my actual work is more theoretical and focused

on conceptual aspects, I see how it impacts the work of others and how I can influence the outcome of the complete system and improve clinical diagnostics. Also, MRI has so many different aspects: If one topic gets tedious, there are plenty of others to explore – probably too many to cover in a single lifetime.

What are the biggest challenges in your job?

During the early concept phases for new MRI scanners, it is very demanding to bring the different expectations from all stakeholders together and find one common solution which works for everyone. This requires a lot of communication about all aspects, including business, technology, medicine, and project management. It's often a painful process to go through, and it's different every time.

What do you think are the most important developments in healthcare?

Historically, I think anesthesia is a highly underestimated development and I always think about this when I am at the dentist. I've seen a few trends come and go, and in hindsight many of the things that were advertised as "gamechangers" turned out to be just buzzwords that

didn't change the world very much. With AI today, this will be different: I believe this is really an innovation which will change the medtech industry dramatically. As well as leading to the creation of many new software products, it will also change the hardware as we know it today. The MAGNETOM Free. Platform is a very good and early example of this.

What would you do if you could spend a month doing whatever you wanted?

If you give me a month, I will be on a boat, scuba diving the tropical reefs with corals and sharks, and seeing the craziest creatures nature has created. Until then, I'll try to keep my fitness up with regular running. For more action, I have reserved a few weekends every year for white-water kayaking. Learning how to windsurf is still on my bucket list. And if you give me another month, I'd take a language course to refresh my poor Arabic.

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