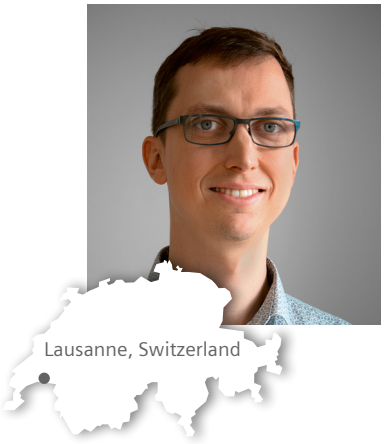
Meet Siemens Healthineers

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.

Tom Hilbert, Ph.D.

Tom was born and raised in a small town in Thuringia, a state known as "the green heart of Germany." In 2007, he began his studies in biomedical engineering and medical computer science at the University of Applied Sciences in Stralsund. The city is on the Baltic coast and Tom developed a passion for sailing there.

During both an internship and a period spent writing his bachelor's thesis at the Lausanne-based Innovation Hub Switzerland run by Siemens Healthineers, Tom gained his first experiences with MR imaging. In 2011, he continued his education by studying medical computer science at Heidelberg University in Germany. During this time, he continued working at Siemens on improving MR methods and wrote his master's thesis at the company. In 2013, with the beginning of his dissertation at the École Polytechnique Fédérale de Lausanne (EPFL), he finally moved to Lausanne, the city at Lake Geneva which he still calls his home. His dissertation focused on quantitative imaging and how it can be translated into clinical routine. He continues to pursue these goals today by leading a Switzerland-wide team of scientists who work on topics related to MR image acquisition and reconstruction within the Swiss Siemens Healthineers Innovation Hub.



How did you first come into contact with MRI?
The first time I came into contact with MRI was during my internship in 2009. It was my first time joining Siemens Healthineers in Lausanne and I was tasked with simulating motion artifacts in MR images. I thought I knew a lot about MRI from my courses at university, but I soon realized we have only scratched the surface of MRI. Even now, more than 13 years later, I feel like I have so much left to learn and understand about MR physics and image reconstruction methods. This fascinated me so much that I have been working with the team in Lausanne ever since 2009, first in various projects to improve the performance of image analysis algorithms, and later diving deeper into the clockwork of sequences and image reconstruction with a focus on quantitative imaging.

What do you find motivating about your job?
The thing that gets me up in the morning and go to work is that we have a chance to make a difference with the methods and tools we are developing. Our goal is to help patients who are struggling with diseases we have not yet fully understood. Although our improvements to modern healthcare are small and incremental, I believe we can make a difference for individuals in the future. So I find it very motivating to hear about clinical researchers classifying tumors with a new quantitative mapping technique, or a neuroradiologist finding cortical dysplasia in an epilepsy patient at 7T that they could not see at 3T.

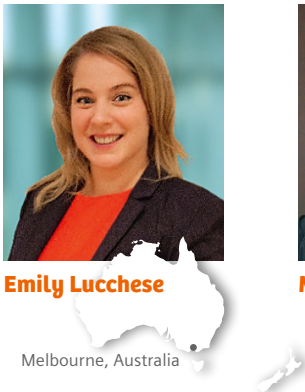
What are the biggest challenges in your job?
I have had to learn to deal with two main frustrations in my job. The first concerns limited resources. We get to meet many scientists and partners of Siemens Healthineers, and they all have great ideas about how we might improve patient care in the future. Unfortunately, we cannot work on every exciting idea – we can only focus on some of them, since the day only has 24 hours. The second is delayed gratification. It can take years for an idea to become a product that can actually help patients. That's because we want to develop methods with scientific rigor and provide robust, validated, and well-tested tools. This rather lengthy process is important for evidence-based medicine, but can become frustrating on a personal level.

What are the most important developments in healthcare?
One of the most important developments, especially in my field of quantitative imaging, is translating scientific methods into clinical routine. As well as finding ways of quantifying microstructural information and seeing how they relate to diagnoses and treatment monitoring, we also need to focus on making them easily useable in clinical workflows. The academic community does a great job of identifying and developing these new methods. In my opinion, the job of Siemens Healthineers is to use these new findings and make them accessible for patients today. This can be difficult, since they should not interrupt MR acquisition workflows by, e.g., lengthening acquisition times, but they should also decrease the workload for radiologists by minimizing the manual inputs required. Therefore, I will be focusing my efforts on acceleration methods and automatic analysis tools for quantitative imaging.

What would you do if you could spend a month doing whatever you wanted?
In our daily work, we have so many ideas that could have great potential to improve MRI methods. Unfortunately, we rarely manage to work on these ideas because we are already so busy with other projects. So if I could spend a month doing whatever I wanted professionally, I would use the time to focus on just one idea, uninterrupted and maybe with some colleagues, and develop it as far as we can in that time. Obviously, on the condition that none of the great ideas we are already working on are stagnating.

From a private point of view, if I could spend one month doing whatever I wanted, I would spend the time sailing. Ever since I lived on the Baltic coast, and now here in Lausanne on Lake Geneva, I've really enjoyed sports sailing. So I would take a small catamaran to hop from island to island somewhere warm, with no plans and just following the direction of the wind each day.

Get to know us



Find more portraits of our colleagues around the world!

www.magnetomworld.siemens-healthineers.com/meet-siemens-healthineers