

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.

Solenn Toupin, Ph.D.

After earning a master's in engineering near my hometown in Brittany, western France, I had the invaluable opportunity to join Siemens Healthineers in 2014 while pursuing doctoral studies at the electrophysiology and heart modelling institute (LIRYC) in Bordeaux. In 2017, I completed my Ph.D. in interventional cardiovascular magnetic resonance imaging (CMR) and joined the French Scientific Partnership team as a clinical scientist. I bring my passion for cardiology and cardiovascular imaging to my main speciality of CMR. Within the team, my daily responsibilities focus on linking predevelopment researchers from Siemens Healthineers with local clinical partners through research projects that often involve prototypes and work-in-progress pulse sequences from Siemens Healthineers. I also enjoy teaching CMR to technicians, and I develop customer learning materials, which I teach both in person and online.



Bordeaux, France



How did you first come into contact with MRI?

I attended lectures on MRI physics while in engineering school, but my first real contact with MRI occurred when I was doing my master's thesis at LIRYC in Bordeaux. I think most CMR enthusiasts can relate to how fascinated I was the first time I saw a cine of a beating heart. My passion for CMR has continued to grow since then. CMR brings together two subjects that are close to my heart: education and technical innovation. Well-trained staff and robust pulse sequences are both necessary to deal with potential arrhythmia or breathing motion and to allow more patients to benefit from high-quality CMR exams.

What do you find motivating about your job?

My role as a clinical scientist provides me with the unique opportunity to bridge the gap between academy and industry. I also feel privileged to interact daily with experts on both sides: our academic partners and the research scientists at Siemens Healthineers. Successful collaborations rely on building long-term, trusting relationships with our partners, and I'd say that the most rewarding part of my job is being able to experience these bonds of trust. Being involved in each step of a collaborative research project, from the first experiments at the MR console to the final joint publication, makes me excited

about my job every day. I enjoy meeting well-known physicians and their teams throughout France, in cities such as Bordeaux, Paris, and Lille, and learning about their best practices. Ultimately, I'm driven by the way these MRI innovations – which started out as mere prototypes – benefit clinical routines and people's lives.

What are the biggest challenges in your job?

I'm responsible for supporting local academic partners with research on a wide range of collaborative topics that primarily focus on CMR. The biggest challenge is fulfilling the expectations of our partners while being experts ourselves. This allows us to create synergies between our partners' research projects and our own developments at Siemens Healthineers. It's all about asking questions, listening intently, and learning every day. Last year, I was proud to help facilitate a new collaboration with Professor Jérôme Garot and his team at the South Paris Cardiovascular Institute. The partnership was about validating artificial intelligence algorithms using the institute's unique database of stress CMR patients, which is the only one of its kind in the world. This project was challenging in many ways, but I'm excited about how the results of these algorithms may ultimately improve risk prediction for adverse cardiovascular events.

Another major challenge is having to switch from one research topic to another as we move from one partner's site to the next. In the same week, I can support research on arterial spin labelling perfusion in neonates, interventional CMR for ablation of arrhythmia, and high-resolution perfusion for stress CMR. The rapid pace of MRI innovations means that staying up to date is not an easy task. Hopefully, I can count on the support of other clinical scientists and application specialists from the whole MAGNETOM community.

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

I love to travel to dream destinations where I can discover new cultures and go scuba diving. If I couldn't travel to somewhere like that, I'd spend most of my vacation doing pottery. I still need to improve my skills on the potter's wheel before I can dare to offer my creations to my family and friends!

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