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.

Pedro Itriago Leon

Pedro was born in Caracas, Venezuela. He started his MR career there in 1989, working as a technologist at the first MRI suite in the country: Instituto de Resonancia Magnética (IRM) La Florida. In the 14 years he spent there, Pedro oversaw the introduction of many new MR applications as the institute added new scanners with newer software to its fleet. He was also the technologist in charge of supporting the institute's MRI clinical research group. In 1992, Pedro began working as a freelance MR application specialist for Siemens Venezuela, covering South America. In 1996, he joined the Global Siemens Freelance MR Application Specialist group. Before becoming a U.S. MR collaborations manager based in Houston, TX, USA, in 2018, he supported the Test Team in Erlangen, Germany, in the release of various new systems and software versions from *syngo* MR B13 to *syngo* MR E11A. Pedro also developed protocols for several MR systems from Siemens Healthineers both in Erlangen and Shenzhen, China, and worked in the applications team in Erlangen, where he was involved in the development of the 3T MAGNETOM Vida.

Houston, TX, USA

How did you first come into contact with MRI?
I started working as an MR technologist at IRM La Florida on a MAGNETOM 42, also known as GBS II (for the German-speaking readers, GBS stands for *Grundbausatz*, which roughly translates as "MR kit"). It was a completely different experience using an MR scanner back then. Numaris 2 was the software platform, and there were only three local coils available: Head, Spine, and a multi-purpose Helmholtz coil (which had to be manually tuned), plus the Body coil inside the magnet, which was used for all body imaging. We could only scan patients in the isocenter, which made for quite interesting patient positioning in MSK exams. A brain double-echo SE could run for about 8 minutes. You had to wait a couple of minutes for the images to be calculated, and about 10 seconds if you wanted to magnify an image. The only sequences you had were single- and multi-echo SE, and IR – and you could only acquire images in one orientation at a time. Multislice-multiangle (MSMA, an acronym we still use in protocols from Siemens Healthineers today) came in a later software update. The fastest sequences back then were the newly developed FLASH and FISP GRE sequences.

What do you find motivating about your job?
Having participated in the clinical side and the development side of MR collaborations, I know that both sides want to improve patient care – but are, in essence, worlds apart. The path of communication between these two sides can be quite difficult, as one speaks in medical terms and the other speaks in physics and engineering terms. Siemens Healthineers speaks both of these languages – and as a collaborations manager, I get to experience the synergy between the clinical input that creates and validates new techniques, and the engineering of those techniques. This combination is what makes innovations a reality. It's amazing to see the two spheres come together for a common goal: improving patient care worldwide. As well as leading to new and exciting applications, this can also lead to new hardware. So I'd say this is the thing I find most motivating.

What direction do you think the MRI development should take?
I think we should keep pushing toward improving the overall patient experience – by making exams that are currently

difficult possible and by shortening the amount of time the patient spends in the magnet. We've already seen how newer acquisition techniques help shorten acquisition time. They include iPAT, CAIPIRINHA, Compressed Sensing, Simultaneous Multi-Slice, and Wave CAIPI. And with Deep Resolve, for example, we have witnessed how AI reduces acquisition times whilst also improving image quality. Yet, this is only the beginning of what AI can do to improve patient care. There is also work that needs to be done in motion correction, which will allow us to reduce the number of exams being done under anesthesia, and will help in acquiring clinically useful images for patients unable to hold their breath or stay still. While this will improve many types of exams, pediatric imaging will benefit the most, because this is where anesthesia is used most and makes the prospect of an MRI exam cumbersome and stressful for clinicians and parents alike.

What would you do if you could spend a month doing whatever you wanted?
I've spent so much time traveling around the world for work. It allowed me to visit many new places and make some of them recurring backdrops of my life. But suddenly finding myself in one place for what feels like such a long time, even though it's only been four years, I must say that I miss visiting the places I came to cherish as second homes. If I had the time, I would try to visit them again, and travel to some places I've never been before.

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