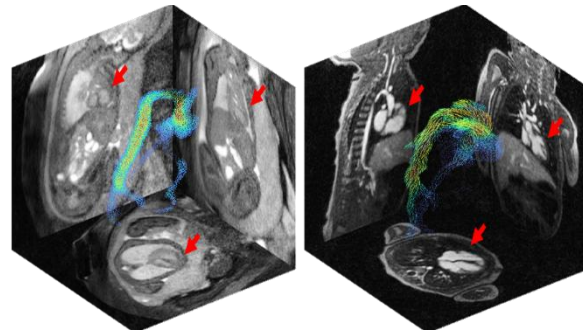


Available PhD and Post-Doctoral Positions in Cardiac MRI Development

Location: Lausanne, Switzerland

Application deadline: November 1st 2026



Background: Cardiovascular magnetic resonance (CMR) imaging has the potential to serve as a non-invasive “one-stop” modality for congenital heart disease (CHD). However, its broader impact can be limited by reliance on contrast agents, the need for sedation or anesthesia, and dependence on specialized expertise. The aim of this SNSF funded project is to develop cutting edge three-dimensional cardiovascular magnetic resonance imaging techniques with AI-powered motion compensation to overcome these barriers while comprehensively assessing cardiac anatomy, blood flow, and function.

Project Description: This work will combine MRI physics and engineering research with an impactful clinical application. PhD and Post-doctoral projects will focus on MRI sequence design or image reconstruction depending on existing background and interests. Initial development and simulation will be performed in Matlab and Python followed by optimization in phantoms and healthy adult volunteers. Translation of all methods to fetal, pediatric, and adult congenital heart disease populations will be facilitated through local and international collaborative partners.

Location: This project will take place in the Department of Radiology at the Lausanne University Hospital (CHUV) and the University of Lausanne (UNIL) in Switzerland under the supervision of Dr. Christopher Roy as part of the research team of Prof. Matthias Stuber. You will be part of a group of engineers and physicists working within the hospital in close collaboration with our clinical partners in Radiology and Cardiology. Our group has access to state-of-the-art research and clinical MRI scanners, and you will actively collaborate with Siemens Healthineers, and will be able to learn pulse-sequence programming in the Siemens MRI scanner environment.

Qualifications: We are looking for highly motivated candidates with either a master’s degree (for PhD position) or PhD (for post-doctoral position) in engineering, physics, life science, or a similar degree. Strong communication skills, and the ability to think creatively and critically within a team environment are required. Computer programming skills are desirable. Previous experience with MRI physics and image processing is an advantage.

To Apply: For further information or to apply (including a CV and motivation letter), please contact Dr. Christopher Roy (christopher.roy@chuv.ch) before November 1st, 2026.