

Post-doctoral research fellowship in aortic 3D/4D MRI

At Sorbonne University, Paris

Summary

A research fellow appointment is available within the Cardiovascular Imaging team at Laboratory of Biomedical Imaging, which is under the umbrella of Inserm, CNRS and Sorbonne University and located in the center of Paris. The candidate will work on the EIT Health-funded CMRAI project related aiming at investigating the added value of advanced MRI image acquisition and processing in better characterizing and predicting aortic aneurysms. MRI will include high-resolution 3D angiograms and optimized 4D flow datasets, and image processing will focus on volumetric morphology quantification and the extraction of flow-based parameters to better understand hemodynamics-geometry interactions.

The applicant will work in a multidisciplinary environment interacting with researchers and radiologists, as well as with two research engineers currently hired within the CMRAI project to design an integrative and accelerated software from our previous developments in aortic MRI quantitative flow and geometry imaging, in collaboration with the Imageens spin-off.

This is a 1-year appointment potentially renewable.

Responsibilities

The postdoctoral fellow will be responsible of: protocol optimization on a Siemens Sola 1.5T MRI scanner, data acquisition and collection, image processing using existing in-house Matlab processing tools to extract aortic quantitative biomarkers, validation of the newly proposed software features, statistical analyses, drafting documents to submit to the local ethics committee for clinical studies, preparing manuscripts for peer-reviewed journals and communication documents for the CMRAI project, mentoring students, interacting with collaborators and presenting at conferences.

Required qualifications



Laboratoire d'Imagerie Biomédicale

- Ph.D. degree preferably in image processing/acquisition, biomedical engineering, biomechanical engineering, or related fields
- Experience in image and signal processing, MRI imaging techniques, programming skills in both Matlab and Python
- Statistical modeling
- Oral and written English
- Communication skills and teamwork capacities

Contact

Please send your CV and cover letter to nadjia.kachenoura@inserm.fr