PhD student – Functional Renal Magnetic Resonance Imaging

The Faculties of Medicine and Science of the Geneva University Hospital are seeking to fill a full-time (100%) vacancy in the Department of Radiology and Medical Informatics in the context of the EU COST action CA16103 and the Swiss National Science Foundation SNSF-COST project 177140 for a PhD student in the field of functional renal magnetic resonance imaging in chronic kidney diseases.

About the EU COST action CA16103 « PARENCHIMA » and the SNSF-COST project 177140 (http://www.cost.eu/COST_Actions/ca/CA16103)

The overall aim of EU cost action PARENCHIMA is to eliminate the main barriers to the broader study, commercial exploitation and clinical use of renal MRI biomarkers. PARENCHIMA will coordinate the research of leading European groups in this area to: (1) improve the reproducibility and standardisation of renal MRI biomarkers; (2) increase their availability by developing an open-access toolbox with software and data; and (3) demonstrate biological validity and clinical utility in a prospective multicentre clinical study.

To support this networking COST action, the Swiss National Science Foundation (SNSF) has funded a multicentric study on renal MRI in chronic kidney disease patients. This study includes the funding for the present PhD student position.

About the functional cardiac and renal imaging group

We are a clinical research group in the radiology department of Geneva University Hospital (https://www.unige.ch/medicine/radio/en/research-groups/541vallee/) with a strong focus on cardiac and renal imaging. Our group is composed of radiologists and MR specialists with a strong collaborative network inside the CIBM (www.cibm.ch/3T_MR_HUG).

Job description – your research tasks

Specifically, you will be responsible for the acquisition and analysis of renal MRI exams in chronic kidney patients scheduled before their renal biopsy in

Geneva, June 10, 2018
the 2 centers (Geneva and Lausanne) in collaboration with Dr Menno Pruijm and Pr H. Thoeny. You will develop MR pulse sequences and reconstruction algorithms as well as work on the optimisation of a multiparametric renal MR acquisition protocol. Using the expertise available in the EU COST network, advanced analysis tools in this patient cohort will also be developed. You will work closely with radiologists and nephrologists to interpret the data. You will be located in Geneva but you will travel once a week to Lausanne and Fribourg according to the patient recruitment.

Profile and requirements

- Master or equivalent, preferably in MR Physics, Biomedical Imaging/Engineering or related field
- Programming abilities with Matlab, C and C++, as well as R
- Good communication skills
- Experience in signal/image processing is an advantage
- Good level of written and spoken English

General

- Full time position, starting in September 2018
- Standard SNSF salary for PhD student (CHF 47’040/year)
- Four year PhD program
- The call will be closed on July 15th 2018 and an answer will be given to candidates at the end of July 2018.
- For questions about the profile and the description of duties, please contact
  Prof. Dr. Jean-Paul Vallée –
  Tel: +41(0)22 372 7035 – Email: Jean-Paul.Vallee@hcuge.ch or
  Dr. Lindsey Crowe
  Tel: +41(0)22 372 5217 - Email: Lindsey.Crowe@unige.ch

Applications

Applications should be sent by email including a CV, motivation statement, master final marks, list of publications if any and at least 2 reference letters to:

Prof. Dr. Jean-Paul Vallée– Email : Jean-Paul.Vallee@hcuge.ch