Term Vacancy Notice

Date Posted: December 11, 2017

Ryerson is seeking an individual committed to high quality service to students, staff, and faculty for the following vacancy:

POSITION: Post-Doctoral Fellow

DEPARTMENT: Electrical and Computer Engineering

REPORTING TO: Assistant Professor

START DATE: September, 2018

END DATE: September, 2019

GROUP: MAC PDF

HOURS OF WORK: 36.25 hours per week

The Biomedical Engineering Program in the Department of Electrical and Computer Engineering at Ryerson University is seeking a full-time Postdoctoral Research Fellow. The research fellow will be part of the materno-fetal physiology lab which specializes in clinical, non-invasive, magnetic resonance based assessments of gestational physiology in healthy and disease populations, and works collaboratively with obstetricians at Mount Sinai Hospital and fetal cardiologists at The Hospital for Sick Children. The research fellow will be responsible for developing novel acquisition strategies for metabolic evaluations of pregnant women and their fetuses for translational applications that will improve obstetric care and clinical guidelines. The individual will work under the Principal Investigator and at an MR lab located at the iBEST institute and St. Michael’s Hospital.

*The Institute for Biomedical Engineering, Science and Technology (iBEST) is a partnership between Ryerson University and St. Michael’s Hospital that brings together Ryerson’s engineering and science strengths with St. Michael’s biomedical research and clinical expertise to translate research concepts into testable healthcare solutions. Located within the St. Michael’s Keenan Research Centre for Biomedical Science, iBEST’s access to biomedical, technological and clinical expertise allows its members and partners to identify challenges and rapidly pilot, modify and introduce biomedical discoveries and inventions to improve health.*

**Job description** The candidate will have an opportunity to design magnetic resonance (MR) experiments and data acquisition protocols and apply them in clinical studies.
Responsibilities for this position include:

- Programming of novel magnetic resonance protocols for maternal and fetal MRI, MRS, and CEST studies.
- Design of MR phantoms and testing of MR sequences.
- Calculation of specific absorption rate (SAR), radio frequency (RF) power, and temperature prediction.
- Collaboration with MR scientists, engineering and physics graduate students, technicians, and hospital staff.
- Supervision of data collection and management.
- Study coordination and oversight of study procedures.
- Assistance with data analysis and interpretation.
- Preparation of manuscripts for publication and grant applications.

Salary is commensurate with experience. Initial contract is for 1 year with expected renewal based on satisfactory performance. Relocation expenses are not reimbursed. The anticipated start date is September 1, 2018. International applicants are welcome to apply, but priority will be given to Canadian citizens or applicants with a valid Canadian working visa.

Qualifications

The ideal candidate has:

- Solid background in MR physics research and experience with MR sequence development on a Siemens MR system.
- Prior exposure to implementation of motion correction algorithms and compressed sensing.
- Knowledge of clinical research practices and hands-on experience creating MR phantoms for their use in sequence testing.
- Proficiency in statistical analysis programs and/or qualitative methodologies.
- Strong interpersonal, communication and organization skills.
- Strong research potential, high motivation, and proven ability to work independently and as part of a team.
- Completion of a Ph.D. in Medical Imaging, Medical Physics, Biomedical Engineering, or related discipline.
- Must have earned a first doctorate from an accredited doctoral program by the time the position starts, and no earlier than September 2015 (date all degree requirements were completed, not the date of graduation).

Application process

Qualified applicants should apply online with a CV (including the names and contact information for three professional references), along with a letter of interest outlining past research experience, by clicking on the following link Apply Now! Please direct all questions to Dr. Dafna Sussman at dafna.sussman@ryerson.ca

Review of applications will start as of December 30th, until the position is filled.