Position Available: Post Doctoral Fellow

A motivated, serious individual is wanted as a Post Doctoral Fellow to conduct research in MRI Physics and Engineering in the laboratory of Dr. Simon J. Graham, Senior Scientist at Sunnybrook Research Institute in Toronto, Canada. This position is funded for 2 years through a grant from the Mitacs Elevate program (www.mitacs.ca/elevate) with Siemens Healthineers Canada acting as the private sector partner. The Fellow will spend half of their time undertaking specific research projects in the Graham laboratory relating to parallel radiofrequency transmission (pTx), and the other half providing Siemens support of research MRI activities within Sunnybrook and the Greater Toronto Area. At the end of the funding period, the Fellow will have developed a skill set that may make them a candidate for future employment in Academia, or with Siemens.

Within the Graham laboratory, the Fellow will work within a small fast-paced team that is developing novel pTx hardware and applications on Siemens 3 T MRI systems. Hardware development includes the design, construction and validation of a low-cost pTx system including flexible software control, radiofrequency transmission and attendant power monitoring at high channel count (32 channels or greater). Applications include the development of pTx approaches to suppress localized power absorption during MRI of patients with implanted medical devices (eg. deep brain stimulators) and the design of customized radiofrequency pulses to reduce scan time or enhance robustness to MRI artifacts and system imperfections. This is an outstanding environment to conduct research, publish papers and supervise students and technical staff. The pace of the research is fast, and has potential for the creation of intellectual property and technology for commercialization.

The successful applicant must be able to take up this position no later than September 1, 2017.

Specific responsibilities include:
- Developing MRI pulse sequences that integrate prototype pTx hardware on the Siemens Prisma and Biograph mMR 3 T MRI systems at Sunnybrook
- Conducting numerical simulations, as well as relevant benchtop and MRI experiments
- Analyzing data from experiments, and preparing academic publications and internal reports

Required Background:
- PhD. in a relevant background in engineering (e.g. science, biophysics, biomedical, mechanical or electrical options) or physics is required
- Previous experience with MRI is a substantial benefit but not a requirement
- Strong experimental, data analysis, signal processing and computer programming and simulation skills are essential
- Attention to detail is critical
- Strong organizational, communication and problem solving skills
- Self-motivated and independent
The position is an outstanding opportunity for a motivated individual to contribute to a clinically relevant project and develop a broad skill set related to biomedical research.

Interested individuals should email their resume and a cover letter to:

**Subject Line: PDF - Graham Lab**
**Email address:** fusrecruiting@sri.utoronto.ca

**Deadline:** July 31, 2017

We thank all applicants for their interest but only candidates selected for an interview will be contacted.

No phone calls please.

Sunnybrook Research Institute is strongly committed to inclusion and diversity within its community and welcomes all applicants including but not limited to: visible minorities, all religions and ethnicities, persons with disabilities, LGBTQ persons, and all others who may contribute to the further diversification of ideas. In accordance with Canadian Employment and Immigration guidelines, applicants must be eligible to work in Canada. Sunnybrook Research Institute is committed to providing accessible employment practices that are in compliance with the Accessibility for Ontarians with Disabilities Act (AODA). If you require accommodation for disability during any stage of the recruitment process, please indicate this in your cover letter.