Scientist, Physical Sciences Platform
Canada Research Chair Tier 2 – AI
Sunnybrook Research Institute
Toronto, Ontario, Canada

Sunnybrook RESEARCH INSTITUTE

December 01, 2020

Scientist in Physical Sciences and Canada Research Chair – Tier 2 in Artificial Intelligence Applied to Medical Imaging and Image-Guided Therapy (one position)

The Sunnybrook Research Institute (SRI) is seeking candidates for a Scientist position in the Physical Sciences in Artificial Intelligence applied to medical imaging and image-guided therapy. Applicants must hold a Ph.D. in a relevant field (i.e. physics, engineering, computer science) and be eligible for appointment as a full-time Scientist at SRI and as an Associate Professor at the University of Toronto. The candidate will become a member of the Physical Sciences Platform of SRI and may be nominated for a Tier 2 Canada Research Chair.

We are seeking a researcher focused on developing new machine learning methodologies for medical image data in a clinical environment. Examples of research areas of interest include, but are not restricted to: integration of imaging, molecular and clinical data to create prognostic models; development of fast image reconstruction or registration algorithms using deep learning; triaging of patients using AI-assisted image analysis; domain adaptation methods; safety and interpretability of AI for medical applications.

The successful applicant will develop an internationally competitive research program and participate in graduate training through an academic appointment in the appropriate department at the University of Toronto. The applicant will be expected to foster local, national, and international collaborations, work with other SRI Scientists, build complementary translational research capacity, and engage with Sunnybrook clinicians to enable short- and/or long-term clinical translation of their research, ultimately contributing to Sunnybrook's strategic direction in Personalized and Precise Treatments, with a vision of inventing the future of healthcare. The applicant research program is thus expected to align well with one or more of the nine clinical programs.

About Sunnybrook Research Institute: SRI is an independent organization wholly owned by Sunnybrook Health Sciences Centre, one of Canada's leading academic health sciences centres. SRI is the research enterprise for the hospital corporation and is fully affiliated with the University of Toronto. The institute supports $100 million of annual research activities within approximately 250,000 square feet of state-of-the-art research space. SRI has one of the best recognized and most productive teams in the field of medical imaging and image-guided therapy in the world. The Physical Sciences Platform is comprised of 64 scientists, and a total staff of ~300, including close to 100 graduate students and postdoctoral fellows associated with the University of Toronto. There are also extensive opportunities for collaborations within Toronto, which is a globally recognized hub for AI and biomedical research.

Research areas in Physical Sciences include Biomedical Imaging and Image Analysis (MRI, Ultrasound, X-Ray, Digital Pathology, and Optical); Precision Medicine (Radiogenomics, Theranostics); Computational Modeling and Machine Learning; Design and Development of Medical Devices; Biophysics and Bioengineering. A major focus is Image-Guided Therapy, a theme that has been supported by the Canada Foundation for Innovation leading to the establishment of the Centre for Research in Image-Guided Therapeutics; by the FedDev program resulting in Image-Guided Therapy cluster; and by the federal Strategic Innovation Fund giving rise to Inovait, an industry-academic consortium for AI and Image-Guided Therapy. Physical Scientists at SRI engage clinical partners in their research and pursue opportunities to move their innovations to the clinic through pre-clinical and first-in-human testing to commercialize the products of their research by creating start-ups and licensing, and/or by partnering with companies in the development of new technologies.

For more information on the details of the position please see the full posting.

Applicants should email a letter of interest indicating "AI position", curriculum vitae, self-identification form, and the names of three references to CRC@sri.utoronto.ca by February 1, 2021.
Applications are requested by February 1, 2021, but will be received until the position is filled.
Incomplete applications will not be considered.