**Optical imaging – PhD**

**CHU Sainte-Justine Research Center**

CHU Sainte-Justine
Research Center
Mother and Child
University Hospital Center

Université de Montréal

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| Principal Investigator | Mathieu Dehaes, PhD<br>Assistant Professor<br>Radiology and Institute of Biomedical Engineering, Université de Montréal |
| Project duration | 3 years |
| Starting date | Fall 2016 or Winter 2017 |

## Research project description

A Ph.D. position is open at the Institute of Biomedical Engineering at Université de Montréal and the Research Center of the Sainte-Justine Hospital University Center in Montréal, QC, Canada. The laboratory of Dr. Dehaes is seeking one Ph.D. student to develop cutting edge optical imaging techniques for brain and eye imaging. Topics of study specifically focus on developing a spectral-domain optical coherence tomography (SD-OCT) platform for quantitative blood perfusion imaging in the brain and the back of the eye. Candidates with expertise in biomedical engineering, informatics, mathematics, photonics, and physics are preferred. Experience with optical techniques is encouraged.

These projects provide an excellent opportunity for the Ph.D. student to work within a multidisciplinary research team including scientists and clinicians from ophthalmology and neonatology. The Ph.D. student will be encouraged to prepare and submit Ph.D. scholarship proposals to funding organizations and to lead publications. The Ph.D. student will participate in designing innovative methods related to the processing of brain and eye imaging signals and images. The diversity of subject matter will require a creative mind.

The Ph.D. student will be registered through the Ph.D. Program in Biomedical Engineering at University de Montréal and will have a student appointment at Sainte-Justine HUC and access to laboratories and technological platforms.

## Candidates must have:

- Have a Bachelor and/or Master degree in biomedical or electrical engineering, physics or informatics engineering, mathematics, physics or a closely related field
- Experience in research; ability to carry out research experiments and projects
- Candidates with experience in the areas of optical imaging such as optical coherence tomography are strongly encouraged to apply
- Programming experience in computer programming languages (e.g. Python, Matlab, etc.)
- Strong written and oral communication skills in French and English required
- Works independently and participates productively as a team player
- Highly motivated, ability to identify potential problems and develop solutions

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## Conditions

The candidate will be invited to submit in early autumn 2016 an application for scholarship in various competitions of research granting agencies including those of the CHU Sainte-Justine Foundation

## Submit your application

Interested candidates are invited to submit their application by email to Mrs. Geneviève Blain, M.Sc., Study Coordinator , Canadian Neonatal Brain Platform at Sainte-Justine Hospital University Center
at: genevieve.blain@recherche-ste-justine.qc.ca , including:

√ CV showing scientific activity, academic background and research experience

√ Cover letter

√ Transcripts

Check out all our fellowship/internship opportunities on LinkedIn!

### How is it like to study or make a fellowship at the CHU Sainte-Justine Research Center?

Pursue your graduate or postdoctoral studies at the CHU Sainte-Justine Research Center, and be one of the 360 students, fellows and interns who are helping to fast track the development of knowledge in the field of mother, child and adolescent health. Under the supervision of prominent scientists, especially in leukemia, rare pediatric diseases, genetics, perinatology, obesity, neuropsychology and cognition, scoliosis and rehabilitation, you will have the opportunity to work with multidisciplinary scientific teams and collaborators from all over the world.

Our students talk about their experience

### About the CHU Sainte-Justine Research Center

CHU Sainte-Justine Research Center is a leading mother-child research institution affiliated with Université de Montréal. It brings together more than 200 research investigators, including over 90 clinician-scientists, as well as 360 graduate and postgraduate students focused on finding innovative prevention means, faster and less invasive treatments, as well as personalized approaches to medicine. The Center is part of CHU Sainte-Justine, which is the largest mother-child center in Canada and second most important pediatric center in North America. More on research.chusj.org