Announcement of Ph.D. and Postdoctoral Fellow Positions in Medical Image Analysis

Probabilistic Vision Group, Center for Intelligent Machines &

Department of Electrical and Computer Engineering, McGill University

The Department of Electrical and Computer Engineering, McGill University, is inviting applications for a fully-funded Ph.D. position, and a Postdoctoral Fellow position in the field of Medical Image Analysis. The successful candidates will work in the Medical Imaging Lab, under the supervision of Prof. **Tal Arbel**, and join the Probabilistic Vision Group – a vibrant research group that works on probabilistic methods in the context of both the fields of computer vision and medical image analysis. This lab is part of the Centre for Intelligent Machines, a world-renowned, interdisciplinary research centre focusing on intelligence systems (www.cim.mcgill.ca). McGill University is located in the beautiful city of Montreal, an exciting, bilingual, multicultural metropolis in the province of Quebec, Canada.

The research projects focus on the development of new probabilistic graphical models for the automatic detection and segmentation of subtle and complex lesions/tumours for a variety of important neurological diseases, such as Multiple Sclerosis (MS) and brain tumours. Through ongoing collaborations with researchers at the Montreal Neurological Institute, and a local medical imaging company, students/fellows will have access to an enormous dataset of real, multicenter, multi-scanner, MS patient MRI (on the order of several thousands), acquired during clinical trials, as well as real, multi-modal brain images acquired from patients with brain tumours, on which to train and test their frameworks.

The candidate must be have previous experience working on problems in the field of computer vision/medical image analysis, with preference given to candidates that have published in top conferences and journals in the field (e.g. CVPR, MICCAI, IPMI, PAMI, TMI, MIA), and those with experience in developing Bayesian/probabilistic frameworks. Candidates must have strong mathematical skills, especially in the area of probability/statistics, have good programming skills (knowledge of C/C++ and OpenCV is preferable, and basic Matlab skills required), and working knowledge and experience in the domain of machine learning. Accepted candidates will be expected to write conference and journal papers, and strong English writing skills will be required. Candidates must have a master degree or equivalent for the Ph.D. position, however strong candidates with a Bachelor's degree will be considered as candidates for a Master's degree with the expectation that the student be fast-tracked to a Ph.D. after a year of study. Preference will be given to applicants from top ranking schools, and from well-established groups. Only candidates with strong reference letters will be considered.

Details regarding Ph.D. position:

Successful doctoral candidates will receive an annual stipend of $19,500 CAD/year.

Deadline for positions commencing September 2015: **March 30, 2015**.

Please note that applications can no longer be submitted electronically through the Department of Electrical & Engineering, McGill University as the deadline has passed. Interested candidates must first contact Prof. Arbel directly. Only selected candidates will be given special permission to apply through the department. Please note that the McGill Engineering Doctoral Award (MEDA) deadline has also passed, and candidates commencing in Sept. 2015 can no longer be considered for a MEDA award.

Prof. Arbel is a member of the NSERC CREATE-MIA, a university-industry training program in the area of medical image analysis (aggie.cim.mcgill.ca.:8080/create-mia/). Candidates that are interested in joining the CREATE-MIA should state this explicitly in the application.

Details regarding postdoctoral position:

Successful postdoctoral fellows will receive an annual stipend of $45,000CAD (guaranteed for 2 years). Postdoctoral positions can commence right away.

All interested candidates should contact:

Prof. Tal Arbel: arbel@cim.mcgill.ca