McGill

DEPARTMENT OF
ELECTRICAL AND COMPUTER ENGINEERING

Area of Interest and Profile Form

Name:
Email address:

AREA OF INTEREST

Listed below are the ten research areas in the Department of Electrical and Computer Engineering. In accordance with your on-line application form, again indicate your 1st and 2nd choice of interest. If you wish, you may indicate which sub-areas of your two choices interest you most. If you check none of the sub-areas, we will assume that you are equally interested in all sub-areas.

	BIO-ELECTRICAL ENGINEERING		
☐	CMOS sensor microsystems	☐	Brain/Body machine interfaces
☐	MEMS and microfluidics	☐	Systems neurosciences

	COMPUTATIONAL ELECTROMAGNETICS
☐	Computational methods in microwave
☐	Computational methods in power-frequency electromagnetic
☐	Intelligent design methods

	INTEGRATED CIRCUITS AND SYSTEMS
☐	Analog, digital, mixed-signal, microwave/RF integrated circuits; integrated microsystems and MEMS
☐	Computer Aided Design for analog and digital microsystems
☐	Embedded systems, reconfigurable computing and FPGAs/signal processing hardware
☐	Mixed signal testing and design for testability/manufacturability (DFT/DFM)
☐	Signal integrity, electromagnetic compatibility packaging and antennas in integrated systems

	INTELLIGENT SYSTEMS		
☐	Computer vision	☐	Medical image processing
☐	Human computer interaction	☐	Robotics

	NANO-ELECTRONIC DEVICES AND MATERIALS		
☐	Nanoscale optoelectronics	☐	Carbon electronics
☐	Semiconductors and devices	☐	Organic nano material and devices
☐	Integrated and flexible piezoelectric/ultrasonic devices		

	PHOTONIC SYSTEMS		
☐	Nonlinear optics	☐	Photonic sensing and monitoring
☐	Photonic integrated circuits, nano-photonics, opto-electronics and fiber components		
☐	Fiber optics communications, transmission systems and networks		
☐	Optical data/computer devices and communications		

	POWER ENGINEERING		
☐	High power electronics	☐	Distributed generation
☐	Power system operations and planning		

	SOFTWARE ENGINEERING		
☐	Cyber-physical systems	☐	Internet-scale software
☐	Mining software repositories	☐	Model-driven engineering
☐	Release engineering	☐	Requirements engineering

	SYSTEMS AND CONTROL		
☐	Robust control systems	☐	Stochastic and adaptive systems
☐	Discrete-event, hybrid and hierarchical control		
☐	Industrial, manufacturing, aerospace and robotic control		
☐	Nonlinear systems, nonholonomic control and optimal control		

	TELECOMMUNICATIONS AND SIGNAL PROCESSING		
☐	Communication systems	☐	Digital signal processing
☐	Network engineering		

APPLICANT PROFILE

In the following, describe your personal profile in the space allocated. Provide enough information to help the committee appreciate your achievements.

Experience and Interests: *Comment on your professional/research experience and why you would like to pursue graduate studies, with a clear identified objective.*

Academic Profile: *Describe your academic profile, highlighting particular achievements, TA experience, scientific publications and relevant scholarships or awards.*

Additional Information: *Describe any other relevant information, including, for example, volunteer work, leadership positions, special circumstances, etc.*