

MS or PhD scholarship: human sensorimotor control

A funded MS or PhD in the Department of Kinesiology at Laval University (Quebec City, Canada) is available immediately. The proposed research will allow a new MS or PhD student to work on theoretical and experimental approaches to human sensorimotor control.

The successful applicant will be expected to conduct research involving computational and experimental studies in sensorimotor control in humans. Candidates should have obtained or be close to obtaining a BS or MS in kinesiology, neuroscience, or science and engineering disciplines relevant to human sensorimotor control, with an academic record of scientific excellence and a strong interest in an interdisciplinary approach to human motor control.

The candidate will be involved in studies assessing the neural mechanisms underlying the detection and control of whole-body motion. To study these mechanisms, the candidate will use electroencephalography (EEG), electromyography (EMG), techniques to alter vestibular (electrical vestibular stimulation), visual (virtual reality), and proprioceptive afferents (tendon vibration), psychophysics, kinetics, kinematic measurements, and advanced signal processing methods.

The candidate is expected to be a talented, enthusiastic, and eager-to-learn researcher with a strong theoretical and technical background and an interest in applying their skills to assess the sensorimotor control of human movement. Programming skills in MATLAB and some exposure to EEG, and kinetics/kinematics are assets. A strong mathematical, statistical, and/or computational background and knowledge in signal processing are desirable.

Qualifications:

- Ability to manage multiple projects.
- Excellent interpersonal skills; must be able to interact with people of all ages and backgrounds.
- Ability to assess the validity and reliability of research data.
- Ability to set up, operate, and maintain experimental equipment.
- General knowledge of data analysis and statistical applications, programs, and techniques.
- Ability to program experiments using standard experimental software (e.g., MATLAB).
- Ability to analyze research methodology, protocol, and procedures and make recommendations for improvements and modifications.
- Ability to identify and resolve technical research problems.
- Eager to learn, dynamic, enthusiastic, and motivated by challenges.

The funds for this position are available for 2 years for the MS position or 3 years for the PhD position, with the possibility for an extra year.

The MS or PhD student will be supervised by Prof. Martin Simoneau. The student will work with other students and researchers at the research center (www.cirris.ulaval.ca).

To apply, please send a motivation letter, transcripts, a curriculum vitae, and contact information for two references in a single PDF document. Only applicants considered for employment will be contacted. Applications will be accepted until the scholarship is awarded.

Contact: Prof. Martin Simoneau: martin.simoneau@kin.ulaval.ca

The selected person will carry on research at the research center and be enrolled in a graduate program at Laval University. The research center is located off campus. It is an easy bus commute between the campus and the research center. Laval University is located in Quebec City, Quebec, Canada.