Postdoctoral Fellowship: Enhancing the personalisation of an eHealth behaviour change program (ACCELERATION) using automatic expression recognition (AER)

Project summary:

The ACCELERATION program aims to improve behavioural risk factors associated with the development of non-communicable chronic diseases. It is a structured 12-week ehealth program that was developed using an integrated knowledge translation process. It primarily targets increasing physical activity, as well as increasing fruit and vegetable consummation, and reducing tobacco smoking. It uses well established behavioural and motivation techniques to enhance intrinsic motivation in participants.

The current funded study will leverage laboratory based tasks and ecological momentary assessment techniques to be able to capture facial and voice-based expression data. This data will then be used to personalise certain aspects of the ACCELERATION program to enhance individual behavior change. The position will be based at the Montreal Behavioural Medicine Centre (http://mbmc-cmcm.ca), which is a collaborative centre between the CIUSSS-NIM Hôpital du Sacré-Coeur de Montreal, Concordia University, and UQAM

Position summary:

The individual who is selected for this position will be expected to work with study PI's, Drs. Simon Bacon (http://mbmc-cmcm.ca/member/simon-bacon/), Eric Granger (https://www.etsmtl.ca/Professeurs/egranger/Accueil?lang=en-CA), and Kim Lavoie (http://mbmc-cmcm.ca/member/ kim-lavoie-2/), in the coordination of the project. They will also have the opportunity to work with the national investigative team consisting of experts in: health behaviour change; deep learning models for expression recognition; behavioural intervention development and trial methodology; and integrated knowledge translation/patient-oriented research.

In addition to aspects of coordination, the fellow will be able to work on a variety of research-related aspects of the study including:

- Delivery of the psychophysiological and ecological momentary assessment testing protocol
- Recruitment of participants
- Post-testing data processing and analyses
- Development of deep learning based algorithms
- Participating in stakeholder engagement activities

Required Qualifications

- PhD in a related discipline (e.g., Psychology, Physiology, Kinesiology/Exercise Science, Medicine, Computer Science)

- Demonstrated experience conducting research in at least one of the following areas

    - ehealth interventions
    - Stress testing
    - Ecological momentary assessment
    - Applied psychological assessments
    - Deep learning models

- Effective oral and written communication skills
- Excellent interpersonal skills
- Demonstrated research productivity (peer-reviewed publications and conference presentations)
- Ability to work autonomously and take a lead role on projects under supervision of principal investigators

Preference will be given to candidates with:

- Experience using integrated stakeholder engagement strategies
- Openness to learn new methods and techniques in an applied clinical setting
- Ability to communicate (orally) in both English and French

Provincial, national and international candidates are encouraged to apply

Start date, Duration, Stipend, and Location

The start date is flexible but not later than September 2023; funding has already been received.

The position is full time for one year and is renewable. The funding package consists of a stipend (consistent with CIHR funding levels) plus conference / training funding.

The successful candidate could be registered at Concordia University (www.concordia.ca) or UQAM (www.uqam.ca); the actual work would be conducted at the CIUSSS-NIM, Hôpital du Sacré-Coeur de Montreal (https://rechercheciusssnim.ca/).

To apply, please forward the following:

- A complete curriculum vitae, including summary of GPA's, a full publication list (including hyperlinks where possible) and email contact details for two referees
- A letter of motivation and statement of research accomplishments and future research goals
- 2-3 research publications that best demonstrate your fit for the position

How to apply:

- The complete application package must be emailed to: apply@mbmc-cmcm.ca. Please include “Fellowship AER” in the subject line.
- Queries about the application should be sent to Dr. Bacon (simon.bacon@concordia.ca).
- The closing date for receipt of applications is **Friday December 2, 2022, 5pm ET**. Interviews will be conducted in **January 2023**.