McGill UNIVERSITY

Funded Masters and PhD Positions at McGill University, Canada, in Inclusiveness of Community-based Participatory Modelling for Environmental Management

Applicants are invited for funded masters and PhD positions to improve inclusion of marginalised stakeholders in participatory system dynamics modelling. This research is unique in that the candidates will work on both 'technical/engineering' topics (e.g. coding, environmental modeling), as well as 'social sciences' topics (e.g. stakeholder engagement, social learning, policy design). The research will involve participatory model building of models of local environmental management (e.g. water resources, food security, natural resources), including group meeting facilitation, model construction and group policy design. The projects focus on developing better methods to include stakeholders in participatory model building, as well as tools for researchers seeking to improve institutionalisation and stakeholder independence in managing and continued use of participatory model building as a tool for effective and inclusive policy design and social learning in water resource and other natural resource management projects. The research will also develop pathways for the improved inclusion of traditional and Indigenous people's viewpoints in the management of natural resources such as water resources. The candidate will be engaged to work on a participatory group model building project, which will include collaborations with NGOs, community organizations, and governmental agencies currently working on natural resource management issues within Guatemala or Pakistan. Successful candidates will be based in the Department of Bioresource Engineering at McGill University. It should be noted that candidates do not need to have a technical/engineering background (i.e. we welcome applications from people who have completed programs in geography, natural sciences, sociology, and also engineering, computer science, etc.), although a strong ability (or willingness to learn about) environmental modeling is important. Candidates' field research will be conducted in Mayan Guatemala or Pakistan; travel aboard will be funded. Ideal candidates will be available to start between May and September 2018.

Specific positions available
- **Masters:**
    - <u>Study location</u>: Mayan (K'iche' branch) Guatemala.
    - <u>Study topic</u>: *Development of meaningful participatory environmental modelling approaches for multilingual and multicultural settings*.
    - <u>Study questions</u>: Involvement of stakeholders from different linguistic and literacy backgrounds; development of stakeholder-friendly techniques for data management, model calibration and monitoring and model testing.

- **Doctoral:**
  - <u>Study location</u>: Pakistan (رچنا دوآب).
  - <u>Study topic</u>: *Participatory model building and data integration: development of intuitive methods for stakeholder-led environmental modelling*.
  - <u>Study questions</u>: Development of stakeholder-friendly techniques for data management, model calibration and monitoring and model testing; development of protocol for participatory modelling institutionalisation and large-scale adoption.

Qualifications
- Experience in agricultural engineering, civil engineering, social science, water resources management, computer science or a closely related field;
- Strong interest in community participation;
- Proficiency and desire to improve skills in computing and Python for scientific programming and data management;
- A very good knowledge of written and spoken English is required; this should be supported by a valid English proficiency test certificate;
- Linguistic capabilities: Within a reasonable amount of time after beginning your MSc or PhD degree, you must be able to speak a minimum of one language of the chosen study site (Guatemala: K'iche', Tz'utujil, Kaqchikel; Pakistan: پاکستان - اردو، پنجابی، سرائیکی) and conduct group meetings and write reports in those languages;
- The applicant should have an ability to work both independently and as a member of a multidisciplinary research team;
- Working knowledge of GIS software will be considered as a plus.

A Note on Linguistic Requirements

Language learning materials will be provided, but language competencies remain the candidate's responsibility and candidates MUST PASS a language proficiency test in the appropriate study area language before embarking on field work in Guatemala or Pakistan.

زبان سکیھنے کا مواد مہیا کیا جاۓگا. لیکن بول چال میں مہارت آپکی اپنی ذمہ واری ہو گی.مذ ید براں امیدواروں کو اپنے انتحاب سے پہلے زبان کی مہارت کا امتحان پاس کرنا ہو گا.

Xtiqiya chawe wuj chi natijoj awi' ri taq ch'ab'äl re' .Po pa k'isb'äl, xu rät yatikïr natijoj awi' jun ch'ab'äl. Xtiqikutuj chawe chi nak'ut chiqe chi ütz xatijoj awi' nab'ey yatok pa samaj.

Duties and Responsibilities
The candidate will be responsible for:
- Conducting group meeting facilitation, model construction and group policy design;
- Analysis of data;
- Publishing the results in peer reviewed high-impact journals;
- Presenting the results at international conferences and local seminars.

How to Apply
Interested candidates should contact Prof. Jan Franklin Adamowski (jan.adamowski@mcgill.ca) by November 10, 2017, and provide the following: i) CGPA of all degrees taken (undergraduate and graduate); ii) a detailed CV; and iii) information on how the candidate feels that they meet the requirements mentioned above.