Posting Date: Jan 25, 2022

University of Toronto
JOB POSTING – POSTDOCTORAL FELLOW

Campus: St George Campus, Dalla Lana School of Public Health

Area of Research: Spatial Epidemiology, GIS, Statistics, or Mathematics

Backgrounds:

Prof. Erjia Ge is a Spatial and Environmental Epidemiologist, an Assistant Professor of Epidemiology in the Dalla Lana School of Public Health, University of Toronto. Her studies are focused on 1) exploring the impacts of climate change, air pollution, and other environmental exposures on population health; 2) building an integrated health surveillance systems to response emergency health challenges to avoid substantial loss of lives; and 3) exploring health inequity to provide evidence supports for public health and health system improvement.

Prof. Xiaolin Wei is a medical doctor, public health specialists, professor and the Dalla Lana Chair in Global Health Policy in the University of Toronto. He became a Fellow of the Faculty of Public Health of UK in 2012. Xiaolin has conducted research using implementation science frameworks to change clinical practice and make impacts at the policy level in areas of antimicrobial resistance, tuberculosis control and diabetes/ hypertension care. He has published over 120 peer reviewed research papers, and led over $8m research funding as the principal investigator from MRC, DFID, CIHR, StopTB Partnership and HK RGC. He serves as board member and has served as the Secretary General and Vice President of the International Union of Lung Disease. Prof Wei is the founding director of the Global Implementation Science Lab, located in the Dalla Lana School of Public Health (DLSPH), aiming to develop impactful solutions to global health challenges.

Duties:

The Dalla Lana School of Public Health is seeking a highly motivated individual to work on epidemiological cohort analysis and modeling studies to understand environmental epidemiology in respiratory disease such as asthma, tuberculosis and COVID-19, as well as hypertension and diabetes.bronchitis, rhinitis, and other allergic-related respiratory conditions in children, based on the administrative databases from the Institute for Clinical Evaluative Sciences (ICES), and other data sources. The post will funded through CIHR grants.

The successful candidate will work in a highly dynamic environment with exposure to world-leading academic experts and practitioners in the field. His/Her contribution will be to devise state-of-the-art

data analyses and modeling studies to investigate into climate change, air pollution, greenness, and various environmental exposures on children's health, as well as interventions to improve respiratory disease, diabetes and hypertension.

The successful candidate is expected to help formulate his/her research program within the context of related projects. S/he will be supervised by Prof. Erjia Ge and Prof. Xiaolin Wei. The candidate will be benefited within a network of investigators working on public health, spatial analysis, and mathematical modeling. Specific tasks will include:

- Understand and familiarize databases from ICES;
- Collect and compile publicly available databases if needed;
- Access and analyze large database through remote access to ICES portal;
- Develop mathematical and computational models using differential equations, stochastic methods, and machine learning approaches;
- Apply disease modelling techniques to evaluate interventions in areas of Environmental Health in asthma and other respiratory diseases (such as tuberculosis and antibiotic resistance), and publish papers in peer-reviewed academic journals.
- Assist in developing grant proposals in related areas in collaboration with supervisors and other collaborators;
- Contribute to teaching/supervising of postgraduate students;
- Support the supervisor with research related tasks that are called for.

Required qualifications:

Minimum Degree Required: Ph.D.

Preferred Qualifications: Ph.D. obtained within five years of hiring, preferably in Spatial Epidemiology, Public Health, Biostatistics, or Mathematics. Publication as first author in related peer-reviewed journals is essential. The candidate should also have significant experience with cohort analysis, mathematical modeling, and data analysis; strong ability to communicate scientific material; high enthusiasm, strong work ethic, and willingness to perform at a high level consistently. Having experience in analyzing ICES databases is a great asset.

Salary:

$40,000-60,000 per annum depending on candidate's skills and experience.

Please note that should the minimum rates stipulated in the collective agreement fall below the rates stated in this posting, the minimum rates stated in the collective agreement shall prevail.

International postdoc fellow: Non-Canadian residents may apply but must have a work permit to work in Canada legally.

Application instructions

All individuals interested in this position must submit a cover letter, CV and two letters of scholarly references to Prof. Erjia Ge (erjia.ge@utoronto.ca). Other application documents include writing sample/publications and abstracts.

Closing date: Open Until Filled

Supervisor:

Prof. Erjia Ge and Prof Xiaolin Wei

Expected start date: April 01 2022 or Immediately upon successful selection of an applicant

Term: This is a one-year position, renewable for a second year subject to availability of funding and performance of the postdoc.

FTE:

The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.

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The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of color, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.