

## **Canada Research Chair (Tier 2) in Data Science and Biostatistical Methods with Applications to Population Health**

**Posted: November 12, 2020**

**Deadline to Apply: January 8, 2021**

The Faculty of Health (FoH) and the School of Kinesiology and Health Science (KHS) at York University invites applications from outstanding researchers for a Tier 2 Canada Research Chair (CRC) in **Data Science and Biostatistical Methods with Applications to Population Health**. The successful CRC is expected to have the necessary qualifications to be appointed as a professorial tenure-track or tenured professor at the Assistant or Associate level. KHS is one of North America's leading sport science programs, with world-class research representing a broad spectrum of human movement and health. Kinesiology and Health Science scholars are renowned for their broad-based commitment to interdisciplinary and community-engaged research and service. The Faculty is home to organized research units and partnerships with regional hospitals and community healthcare providers that offer a unique opportunity for cross-disciplinary collaboration with high impact.

A CRC in Data Science and Biostatistical Methods with Applications to Population Health aligns with the priorities of the Strategic Research Plan of York University and the School. In particular, this position aligns with the Faculty's vision and mission of conducting research that addresses health at all levels, including the individual and population, both local and global. Such a position links concretely to York's identified institutional areas of research opportunity including: 1) Exploring and Interrogating the Frontiers of Science and Technology; 2) Building Healthy Lives, Communities and Environments; 3) Advancing Fundamental Inquiry and Critical Knowledge. This CRC also reflects priorities identified in the Strategic Research Plan of the School of Kinesiology and Health Science to expand collaborations across the disciplines of statistics, epidemiology, health policy, nursing, biology, and the behavioral health sciences.

Applicants must have a PhD in biostatistics, computer science, engineering, bioinformatics, or a related discipline. The successful candidate will be a strong methodologist and will be able to contribute to a variety of complementary areas throughout their career. As an emerging leader in their field, the CRC will provide a focus for growth and collaboration with internal and external stakeholders in epidemiology, health analytics, community, and population health. Within the Faculty of Health, this CRC is well-aligned with the School of Health Policy and Management's Health Informatics program and the Dahdaleh Institute for Global Health Research, and will foster collaboration and growth of existing research clusters within such units as the Canadian Centre for Disease Modeling, Institute for Social Research, as well as the Schulich School

of Business Master of Business Analytics and Lassonde School of Engineering programs. The successful candidate must therefore demonstrate: i) an outstanding (or potential to be outstanding) record of research and external funding, and; ii) excellence (or potential for excellence) in graduate and undergraduate teaching. Evidence of graduate student mentorship, leadership experience, and broad-based research collaboration is also preferred. The successful candidate must be suitable for prompt appointment to the Faculty of Graduate Studies.

Candidates must provide evidence of research excellence or promise of research excellence of a recognized international calibre as demonstrated in: the research statement; a record of publications (or forthcoming publications) with significant journals in the field; presentations at major conferences; awards and accolades; and strong recommendations from referees of high standing.

Given the increasing relevance and importance of big data in the health of individuals and emerging threats to population-level health problems, this position will harness the power of data and evidence-based research to improve health at the community and population levels. This position will complement KHS's existing biostatistical and epidemiological faculty - but will also allow a clear and specific focus on techniques for large databases and emerging research priorities for integrated, community-based research and decision making. The CRC appointed to the School of Kinesiology and Health Science will offer leadership in cutting edge themes of data science and biostatistical methods. The selected candidate's scholarly expertise in innovation may engage with some aspects of the following:

- Applications of big data/machine learning algorithms to statistical genetics; proteomics; rehabiolomics; etc.
- Efficacy and use of eHealth or mHealth innovations in health services and public health
- Data mining of clinical and other databases, such as those at the Institute for Clinical Evaluative Sciences (ICES)
- Integration of non-traditional large and/or open data sources such as Google searches, tweets, geocoding, etc. in pandemic modeling and monitoring trends such as the use of active transportation
- Applications of big data analytics in sports (e.g. wearable technologies) or public health

Building on an established record of scholarship, the CRC will strengthen the School's existing excellence in the teaching and mentorship of undergraduate and graduate students and will contribute governance expertise to the University in the area of open data. This position will also provide new prospects in terms of teaching and learning by strengthening core offerings in research methods, and statistics, while introducing a variety of data science techniques to understand patterns of disease or the determinants of health at the population level. Excellence or potential for excellence in teaching, course design, innovative pedagogy, experiential learning, and student mentorship is expected.

Graduate students, post-doctoral fellows and undergraduate students will benefit from a research and teaching program that is explicitly focused on the importance, methods and applications of advanced statistical modeling and big data techniques; areas of increased relevance in our society. Evidence of or potential of excellence in teaching will be provided through: the teaching statement; teaching accomplishments and pedagogical innovations including in high priority areas such as experiential education and technology enhanced learning; teaching evaluations; and strong letters of reference.

York University has already committed to the importance of data and evidence-based decision modeling in other program areas, and this position will build on these emerging strengths with a specific focus on community and population health. Candidates are therefore expected to present, as part of their application, a well-elaborated research agenda that sets out their plans and ideas for the first five years of their tenure as a CRC holder. The holder of the CRC is expected to seek grants to support their research from relevant external funding agencies, and this expectation should also be addressed in the research agenda. Candidates are asked to approach their application as an opportunity to make the case for why and how their own research agenda is, in the candidate's view, of central importance to the future evolution of the area of biostatistical methods and data science within KHS. Particular attention should be paid to how the candidate anticipates fostering academic and community-based collaborative initiatives within the School, Faculty, and beyond.

### **Canada Research Chair Program Eligibility Criteria**

The Canada Research Chairs program seeks to attract outstanding researchers for careers at Canadian universities. Appointment to a Tier 2 Chair is for five years, renewable once, and comes with enhanced research support from the program. Tier 2 Chairs are intended for exceptional emerging scholars (i.e., those who, at the time of nomination, are within 10 years of attaining their highest degree, with consideration for career breaks). Applicants who are more than 10 years from having earned their highest degree (and where career breaks exist, such as maternity, parental or extended sick leave, clinical training, etc.) may have their eligibility for a Tier 2 Chair assessed through the program's [Tier 2 justification process](#). Further CRC program information and eligibility criteria can be found at the following website: <http://www.chairs-chaire.gc.ca>

The successful candidate will be required to work with the Faculty and the Office of the Vice-President Research and Innovation to prepare the formal CRC nomination. The Chair is subject to approval by the CRC program review process.

### **Commitment to Equity**

For this nomination, we are particularly interested in candidates with diverse backgrounds and especially encourage candidates in equity, diversity and inclusion categories, including members of the four federally designated groups (women, members of visible minorities (racialized groups), Indigenous peoples and persons with disabilities)

to apply. York University also recognizes the legitimate impact that career interruptions (e.g. maternity leave, parental leave, leave due to illness, etc.) may have on a candidate's record of achievement. Applicants are encouraged to explain in their application the impact that career interruptions may have had on their record of research achievement; this will be taken into careful consideration during the assessment process.

York University is an Affirmative Action (AA) employer and strongly values diversity, including gender and sexual diversity, within its community. The AA Program, which applies to women, members of visible minorities (racialized groups), Aboriginal (Indigenous) people and persons with disabilities, can be found at [www.yorku.ca/acadjobs](http://www.yorku.ca/acadjobs) or by calling the AA line at 416-736-5713. Applicants wishing to self identify as part of York University's Affirmative Action program can do so by downloading, completing and submitting the form found at: <http://acadjobs.info.yorku.ca/affirmative-action/self-identification> form.

All qualified candidates are encouraged to apply; however, Canadian citizens, permanent residents and Indigenous peoples in Canada will be given priority. No application will be considered without a completed mandatory Work Status Declaration form which can be found at <http://acadjobs.info.yorku.ca/affirmative-action/work-authorization-form>.

York University has a policy on [Accommodation in Employment for Persons with Disabilities](#) and is committed to working towards a barrier-free workplace and to expanding the accessibility of the workplace to persons with disabilities. Candidates who require accommodation during the selection process are invited to contact Dr. Angelo Belcastro, Chair, School of Kinesiology and Health Science at [kinchair@yorku.ca](mailto:kinchair@yorku.ca).

This position, subject to budgetary approval, will commence July 1<sup>st</sup>, 2021.

### Details of Application

Interested individuals should send an application that includes:

- Cover letter
- Curriculum vitae (CV)
- Statement of teaching experience and philosophy
- Names of at least three referees (note: referees will only be contacted if the candidate is short-listed)
- Research agenda (up to 1,500 words)
- Copies of relevant publications (up to 5)

### Application Details

Applications should be submitted by January 8, 2021. Candidates are asked to submit their application by email to: **Dr. Angelo Belcastro, Chair, School of Kinesiology and Health Science, York University, [kinchair@yorku.ca](mailto:kinchair@yorku.ca)**. Further information about the School of Kinesiology and Health Science can be obtained at [www.kinesiology.yorku.ca](http://www.kinesiology.yorku.ca) and [www.yorku.ca/kahs](http://www.yorku.ca/kahs).