

# Full-time Biostatistics PhD student for the DEPRESSD Project at McGill University

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## About the Project

The DEPRESSion Screening Data (DEPRESSD) Project (<https://www.depressd.ca>) is a collaborative endeavor that was set up by Drs. Brett Thombs and Andrea Benedetti, who partnered with local and international experts to evaluate the diagnostic accuracy of depression screening tools by conducting individual participant data meta-analyses (IPDMAs). To date, the DEPRESSD Project has been funded by 17 CIHR grants and includes over 350 investigators from 59 countries, with numbers growing as more data are accrued. The DEPRESSD databases represent a highly novel and valuable resource, which is beginning to lead to important outputs. In the past few years, the team has published important IPDMAs on (1) screening tool accuracy; (2) statistical methods in IPDMA; and (3) other methodological studies that advance work on screening questionnaires and their application.

The DEPRESSD team has also launched a Living Systematic Review of Mental Health in COVID-19 Project in 2020 (<https://www.depressd.ca/covid-19-mental-health>). COVID-19 is a serious health threat, and the situation is evolving daily. The risk will vary between and within communities. Mental health during the current COVID-19 outbreak may be negatively affected by fear of long-term personal, social, and societal implications of the crisis and from isolation due to social distancing and movement restrictions that have been put into place. Living systematic reviews are systematic reviews that are continually updated and provide ongoing access to results via online publication. The objectives of our living systematic review are to evaluate (1) changes in mental health symptoms among the same participants from pre-COVID or across delineated events during COVID-19 (e.g., outbreak announcement versus peak, peak restrictions on movement versus post-restrictions), and (2) the effect of interventions on mental health symptoms during COVID-19.

The DEPRESSD Project is currently looking for potential candidates to join the team as a PhD student.

## Training Environment

Training will be based in the [PhD Biostatistics program](#) at the Department of Epidemiology, Biostatistics and Occupational Health, School of Population and Global Health, McGill University. During the program, the student shall develop skills to develop new statistical methods as needed and apply new and existing methods in a range of collaborative projects in Health Sciences. The student will work closely with the DEPRESSD team to develop a thesis project, focusing on statistical methods using depression screening IPDMA data, on topics such as:

- Meta-analyses of screening tool accuracy, including subgroups; head-to-head studies to identify the most accurate screening tools; development and validation of shortened forms; and development and validation of personalized risk models for depression screening;
- Statistical methods research, including network meta-analysis approaches, smoothing strategies, and machine learning techniques for IPDMA of binary variables.

The student will work in a diverse research team mixed with staff and students, under the supervision of Drs. Thombs and Benedetti.

### **The ideal candidate will meet the following qualifications:**

- A Master's degree in Biostatistics, Mathematics, Statistics or equivalent
- Research experience in the health sciences, including data management, evidence synthesis and manuscript writing are assets
- Good interpersonal skills and a strong capacity for teamwork
- Excellent organizational and communication skills

**Start Date:** September 2023

**Funding:** The Department of Epidemiology, Biostatistics and Occupational Health, jointly with the DEPRESSD team, offers an annual funding package valued at a minimum of \$25,000 for a maximum of four years. For international PhD students, the Department of Epidemiology, Biostatistics and Occupational Health will use different mechanisms such as Deferential Fee Waivers to cover the International Differential tuition so that they pay tuition at the same level as Quebec students.

**To apply:** Interested candidates should submit (1) a cover letter, (2) a curriculum vitae, (3) an unofficial transcript, (4) a writing sample, and (5) a written reference letter or contact details of up to three references, to Suiqiong Fan ([suiqiong.fan@mail.mcgill.ca](mailto:suiqiong.fan@mail.mcgill.ca)), the DEPRESSD Project Coordinator. The application deadline with the DEPRESSD team is **October 15<sup>th</sup>, 2022**, and the application deadline for the PhD application is December 1<sup>st</sup>, 2022.

DEPRESSD Team will support the selected candidate in their application for the PhD program. However, please note that the DEPRESSD team cannot guarantee acceptance into the program. Please visit the Department of Epidemiology, Biostatistics and Occupational Health website for details of how to apply for the PhD Biostatistics program.