

To the admission committee,

I am thrilled to present you my application for a Ph.D. in *Mathematics and Statistics* at McGill University. Back in 2014, I decided to pursue a bachelor's degree in mathematics in a statistics concentration at the *Université du Québec à Montréal (UQAM)*. I knew a few friends who had completed the program and they highly praised the institution.

I had been a big science enthusiast since high school, especially biology and physics. I chose the latter in 2011 when I started my first university degree at the *Université de Montréal*. Although personal circumstances led me to interrupt these studies, I dearly enjoyed the education I received. It made clear I preferred the theoretic and mathematical aspect of sciences.

However, I credit the great teachers I had at *UQAM* for providing me the passion for pure mathematics. The field of statistics also led me to develop a great affection for the implementation of software. For my Ph.D., I desire to continue doing research in this branch of statistics and related topics like probability and algorithmic mathematics, but also to develop applications.

My current research objectives concern the modelling of dependance in genotypic data. I developed the expertise through the good relationship I have with my advisors (Fabrice Larribe, Sorana Froda) and by actively participating in numerous workshops and seminars.

Stochastic modelling is the broad area where lie my research interests. My involvement in the field of genetics sparked my interest in random graph theory and probabilistic graphical models. Also, algorithmic complexity and dimensionality reduction are topics inherent to my current research projects. Moreover, I irreverently spend some of my spare time trying to develop applications of spatial statistics, mainly point processes. I would be excited and confident to explore any of these broad topics from a research perspective.

At *UQAM*, I had the privilege to be accompanied by some very talented fellow students. This allowed us to focus intensely on our learning. For this reason, I hope to extend my studies at McGill University for it's good reputation, high profile. I had to complete two of my master's courses through the inter-university credits transfer agreement so I took the opportunity to follow them at McGill. I wanted to experience attending classes in English and start fresh in a different environment. The transition felt seamless.

I have been gladly involved in the activities of the mathematics department for the past four years, from teaching to social implication. I very much look forward to continue all of this at McGill University. It is clear that a change of scenery is what would be most beneficial to my fulfilment during my Ph.D.

Thank you for your consideration.