**Personal Statement**

Mathematics has held a special position in my life for as long as I can remember. During my undergraduate career, however, it has become something I find enjoyment in, and has become more than a tool. Having taken mathematics courses out of enjoyment and as electives, I have decided that the Differential Geometry group at McGill best suits my interests, and I would like to work under Professor Niky Kamran.

I am applying for a master's in mathematics in the hopes of continuing to learn geometry and having an opportunity to conduct research in the field as well. Furthermore, the Mathematics faculty of McGill would provide an excellent environment to pursue this path, which I have learned after visiting the university and talking to Professor Niky Kamran.

In particular, during my visit to McGill, Professor Niky Kamran gave me the opportunity to sit down with him and discuss his research for an hour or so, just so that I could get a feel for the work being done by himself at McGill. During the hour, we discussed the differences between applying for a master's of mathematics as opposed to a master's of physics, and Professor Kamran was able to shed some light on many uncertainties I have had in the process of applying for a master's. One such insecurity that Professor Kamran helped address was the subject of interest.

I have always found Physics and Mathematics to be interesting, each for their own reasons. Initially, I tended towards physics, however, as my undergraduate career progressed the appeal of physics decreased. This is largely in part due to never being completely taught all of the mathematics behind more complicated physical theories. Counter to this, my enjoyment for mathematics began to increase. Where courses in physics left holes in my understanding, mathematics would consistently provide a structure that would leave me satisfied with the course material and looking forward to learning more. This became all the more clear while I was taking Geometry of Manifolds with Professor Ruxandra Moraru at the University of Waterloo.

Majority of my research experience has been in the field of particle physics. During the Fall of 2017, I worked at SNOLab as a research assistant under the supervision of Christopher Jillings. My work involved managing data collected by the DEAP collaboration on site, a dark matter search experiment, and was primarily done in C++ and Python. I was given the opportunity to work in an environment with a large collaboration, and gained experience giving talks to collaborators that lived on other continents. In the summer of 2018, I worked as a research assistant at TRIUMF under the supervision of Thomas Lindner and Mark Andrew Scott. I worked primarily in C++, and worked on reconstructing paths of muons given certain detector information.