Félix Bélair

Education

2021–2024 **Bachelor of Science, Honours Physics**, *McGill University*

Relevant Coursework: Optics, Solid State, Machine Learning, E & M, Quantum I & II, General Relativity

Research Experience

2023-2024 **Prof. Djordje Romanic**, *McGill University*

- Conducted data analysis on LiDAR wind measurements collected during Montreal's worst rainstorm in the past decade. I investigated the change in the wind velocity profile near the boundary layer caused by the downburst.

Summer 2023 **Prof. Christopher Wilson**, *IQC – University of Waterloo*

- Set up an instrument (Qblox) that communicates with qubits by sending out and receiving microwave pulses. The device would replace a rack of electronics that did the upconversion, downconversion, pulse generation, IQ mixing and attenuation of the signal.

Summer 2022 **Prof. Peter Grütter**, *McGill University*

- CAD designed and upgraded a low-temperature AFM, making it more reliable when cooled down to liquid helium.
- Constructed a device to quickly measure Q factors of cantilevers under a high vacuum before using them in experiments.

Summer 2021 **Prof. Thomas Brunner**, *McGill University*

- Physical design and software development of a device to monitor a cleanroom's temperature, pressure, humidity, and particulate count.
- Sensors were connected to a Raspberry Pi and the case design was modeled using Solidworks.

Work Experience

2021–2023 **McGill Physics Outreach**

- Organized and ran workshops for the McGill physics hackathon
- Prepared and gave weekly lectures to CÉGEP and high school students for the McGill Physics Olympiad Program (MPOP)
- Participated in the McGill Space Explorers program and gave workshops to primary schools.

2019–2021 **Grader and Tutor**, *Marianopolis College*

- Grader for Calculus I & III
- Tutor for CÉGEP math and physics courses

Skills

Software: Python, Java, Arduino, Mathematica, COMSOL, MATLAB

Languages: English - fluent, French - fluent

Montréal, Canada
438-932-9020 • *felixbelair@gmail.com*