



Montreal retained its title as the best student city in North America in the 2019 QS Best Student Cities index. It is placed sixth worldwide. The universities in the city enjoy an excellent reputation with more than 200,000 students, including 42,000 international students. Furthermore, with the largest pool of university researchers, the Greater Montréal research hub is one of the most highly funded in Canada.

École de technologie supérieure (ÉTS) is a public engineering school in Montreal, Quebec, Canada. Founded in 1974, ÉTS is part of the Université du Québec network. ÉTS is located in the downtown of Montreal and enjoys its modern facilities with the historic heritage of the Griffintown neighborhoods.

Project description

This research project aims at developing acoustical reference designs and mechanical mounting guidelines for a new type of acoustical flow-sensing velocity microphone designed by a local start-up company. Multi-physics models developed using COMSOL, as well as experimental measurements with specialized acoustical equipment such as intensity probes or airflow source, will be used to characterize the performance of various designs and assemblies. Several MITACS internships with the partner company will give the student hand-on experience with consumer electronic product design and optimization.

Funding

This project will be fully funded with an annual scholarship provided by the MITACS-Accelerate internships program. Consulting mandates by the partner company might be offered within the time limits of the student study permit (when applicable).

Competence

Training in acoustics, interest in physics, hands-on experience with measurements, and passion for applied research.

Research partners

Soundskrit is a funded deep-tech start-up company based in Montreal, Canada. Leveraging years of research in bio-inspired acoustic transducers, Soundskrit is developing directional MEMS microphones for the consumer electronics industry, enabling better sound capture in noisy and reverberant.

More information

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