



PhD student call :

3D Channel and Network Modelling of Drones for Dense and Harmonious Usage of Spectrum

We are recruiting a graduate student to pursue research in the optimization of 6G networks through the use of densely deployed aerial network elements. We invite applications for a PhD position at Polytechnique Montréal, located in Montréal, Canada.

Short project description :

The fundamental objective of this project is to reveal the full potential of aerial network elements (ANEs), such as drones and helikites, to pave the way for holistic wireless coexistence by using ML techniques. A novel framework that proposes techniques to make use of the 3D mobility aspects of ANEs will be designed to improve the sensing and detection performance that can be obtained with mobile sensors. The realistic channel characterization will be obtained and will be verified with field measurements in collaboration with [AERPAAW](#).

The candidate will work with a diverse team of graduate students to integrate their respective research projects to design secure space information networks.

Program : PhD (4-year program).

Academic units : Department of Electrical Engineering, Polytechnique Montréal.

Supervisors : [Prof. Güneş Karabulut Kurt](#) and [Prof. Antoine Lesage-Landry](#).

Required profile : The candidate should have an undergraduate and a Master's degree and in Electrical Engineering, applied mathematics or any other relevant field and have strong expertise in telecommunication, optimization, and programming (e.g., MATLAB, Python, C++, Julia).

Funding : \$25,000/year stipend.

Starting date : As soon as possible (Winter 2025, Summer 2025, Fall 2025).

Application :

If interested in this position, please send your CV, cover letter, and recent transcripts to Professors G. Karabulut Kurt and A. Lesage-Landry at : gunes.kurt@polymtl.ca & antoine.lesage-landry@polymtl.ca. Please indicate *3D-H PhD Application* in the subject line of your e-mail.

We are committed to promoting equity, diversity, and inclusion. We encourage and welcome all people with the required profile to apply, including, but not limited to, women, visible minorities, and people with disabilities.