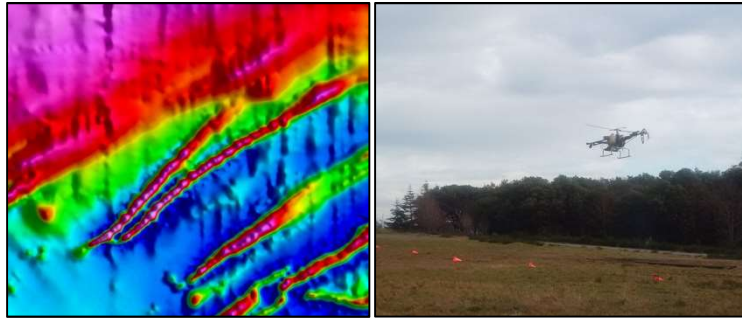


M.Sc. Thesis Opportunity, Carleton University Magnetic Compensation of Unmanned Aerial Vehicles (UAVs)



With rapid advancement in sensor minituarization, many unmanned aerial vehicles (UAVs) are being instrumented with payloads such as magnetometers. The quality of airborne magnetic data acquired by UAVs, however, is largely dependent on compensation. Compensation is a strategy aimed at minimizing interference related to both onboard components and aircraft motion around its principal axes. Done in collaboration with scientists at the National Research Council of Canada, this M.Sc. research project will involve the magnetic characterization of a UAV airframe and the design of a real-time compensation algorithm for UAVs. The selected student will identify sources of electromagnetic interference in an effort to build a mathematical model accurately representing the aircraft's magnetic signature. This includes accounting for permanent, induced, and eddy-current effects.

Terms and conditions:

- The student will register for a M.Sc. in the Department of Earth Sciences at Carleton University. The project starts in September 2017 (preferred) or January 2018.
- The student will be supervised by Dr. Claire Samson.
- We are offering Research Assistantship funding. The student will be considered for a Teaching Assistantship. The level of funding available is adequate for a student paying domestic tuition fees.

The ideal candidate has an undergraduate degree in (geo-) physics, applied maths/computer science or engineering. If interested, please send an email to claire.samson@carleton.ca with: (1) a short statement indicating why you are interested in the project, and (2) a copy of your transcript.