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Start Date: March 1, 2012

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Key Words Describing Areas of Research: Autonomous aerial vehicles; vertical take-off and landing; Nonlinear control; Cooperative control

Research relevance
HQP training; Innovation in the aerospace field; Strengthening Lakehead's research capabilities and reputation nationally and internationally; Reinforcing Canada's leadership in aerospace engineering.

Towards Fully Autonomous Aerial Vehicles
Our current research work is related to vertical take-off and landing (VTOL) unmanned aerial vehicles (UAVs). Our main objective is to provide solutions to several challenging and open problems, obviating some of the technical and practical limitations that are considered as the Achilles' heels in this field. Our research efforts will eventually lead to the development of efficient and reliable attitude estimators and control schemes, ready-to-use in aerospace applications.

The expected high-quality research, supported by practical applications,will play a central role in strengthening Lakehead's research capabilities and reputation nationally and internationally. It will also reinforce Canada's leadership in aerospace engineering, and set up solid foundations for efficient HQP training.