**RESEARCHER POSITION OPENING**

**OPTIC FLOW-BASED AERIAL ROBOTS**

Cognitive Science Department

Rensselaer Polytechnic Institute

A researcher position is available (pending approval) in the Perception and Action (PandA) Lab at Rensselaer Polytechnic Institute to study optic flow-based aerial robotics. The aims of the project are to develop, implement, and test biologically inspired algorithms for visual control. The successful candidate will be expected to:

* implement and evaluate biologically inspired solutions for vision and control on small aerial vehicles
* build pipeline to perform perception, navigation, obstacle avoidance in custom configured development drones
* design experiments, implement and evaluate novel algorithms in both simulation and real drones
* use motion capture system to drive motion or evaluate performance of different algorithms
* prototype enhancements to drones based on requirements of experiments
* be instrumental in research developing naturalistic mechanisms for complex perception and control

Qualifications: Candidates for the position should have a BS or MS degree in engineering with coursework and/or research experience in robotics, computer vision, or a related area. The following qualifications are desired:

* familiarity with ROS, Gazebo, PX4
* understanding of visual odometry, mapping, and SLAM
* proficiency in Python and C/C++
* familiarity with Unix Environments and version control
* hands-on experience working with open-source embedded platforms like Raspberry Pi/Arduino
* experience working with sensors like IMU, stereo cameras, GPS
* good DIY skills to modify and enhance hardware when necessary
* experience with OpenCV, MoveIt
* comfortable taking initiative

Anticipated start date: May 2021

Please contact Professor Brett Fajen at fajenb[at]rpi.edu for information about the application process or with any questions about the position.

We welcome candidates who will bring diverse cultural, ethnic, national and international perspectives to Rensselaer’s work and campus communities. Rensselaer Polytechnic Institute is an Affirmative Action/Equal Opportunity, Race/Gender/Veterans/Disability Employer.