Xuning Yang

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Education

2017–?	**Robotics Institute, Carnegie Mellon University** Ph.D. in Robotics
	Advised by: Dr. Nathan Michael
2015-2017	**Robotics Institute, Carnegie Mellon University** M.S. in Robotics
	Advised by: Dr. Nathan Michael, Dr. Koushil Sreenath
2010-2015	**University of Toronto** B.A.Sc. in Engineering Science with Honours
	Major in Aerospace Engineering, Minor in Robotics and Mechatronics
	Thesis: Control with Complex Specifications for a Flip Maneuver of a Quadrotor Helicopter
	Advised by: Dr. Mireille Broucke

Experience

2015-2017 — **Robust Adaptive Systems Lab, Robotics Institute, Carnegie Mellon University** Pittsburgh PA, USA
Graduate Student
My research focuses on improving user efficiency by concurrent online estimation of user intent and online adaptation based on user performance for teleoperating aerial and ground robots.

2015 — **Rapyuta Robotics Ltd.** Zürich, Switzerland; Tokyo, Japan
Control Engineering Intern
Simulated, implemented and tested an aggressive quadrotor hover-to-hover flip maneuver using a parameterized open-loop trajectory, improved using iterative learning scheme for real-time flip performance.

2014 — **Autonomous Systems and Biomechatronics Lab, University of Toronto** Toronto ON, Canada
Research Assistant
Implemented OctoMap for 3D mapping with Microsoft Kinect and developed constraints and parameters for classification of traversable terrains in an intelligent robot learning system for realtime terrain categorization.

2013-2014 — **IBM Canada Ltd.** Markham ON, Canada
Software Developer, Release Engineering
Design, developed and tested the *Open Source Dependency Extraction* framework in Java to identify open source code and security vulnerabilities in product codebase.

Publications

X. Yang, A. Agrawal, K. Sreenath, N. Michael, "System-Agnostic Adaptive Teleoperation for High-Dimensional Systems". In *Special Issue on Learning for Human-Robot Collaboration, Autonomous Robots*. [In Review.]

X. Yang, K. Sreenath, N. Michael, "A Framework for Efficient Teleoperation via Online Adaptation". In *Proceedings of 2017 IEEE International Conference on Robotics and Automation (ICRA)*, Singapore. May 2017. pp. [pdf]

X. Yang, K. Sreenath, N. Michael, "Online Adaptive Teleoperation via Incremental Intent Modeling". In *Proceedings of the Companion of the 2017 ACM/IEEE International Conference on Human-Robot Interaction (HRI'17)*, Vienna, Austria. Mar. 2017. pp. 329–330 [pdf]

S.C.C. Shih, I. Barbulovic-Nad, **X. Yang**, R. Fobel, and A.R. Wheeler, "Digital microfluidics with impedance sensing for integrated cell culture and analysis". In *Biosensors and Bioelectronics*. Oct. 2013, vol. 42, pp. 314–320. [pdf]

Activities

2017	Teaching Assistant, 16-299 Introduction to Feedback Control Systems, CMU
2016-2017	Class Rep, RoboOrg (Robotics Institute graduate student organization), CMU
2013-2015	Executive Chair, Galbraith Society, University of Toronto

Skills

Systems	Linux/Unix
Languages	MATLAB, Python, C++, C, familiar with Java
Software	ROS, Git, LaTeX.