Dr. Wyatt McAllister

wyattsmcall1@me.com | 512.638.3717

EDUCATION

UNIVERSITY OF ILLINOIS
Ph.D. in Electrical and Computer Engineering
May 2020 | Urbana-Champaign, IL
Conc. in Control and Data Science
Cur. Cum. GPA: 4.0 / 4.0

UNIVERSITY OF ILLINOIS
MS in Electrical and Computer Engineering
May 2018 | Urbana-Champaign, IL
Conc. in Control and Data Science
Cum. GPA: 4.0 / 4.0

UNIVERSITY OF ILLINOIS
BS in Electrical and Computer Engineering
May 2016 | Urbana-Champaign, IL
Conc. in Control Systems
Cum. GPA: 3.92 / 4.0

LINKS

https://wyattsmcall1.github.io

COURSEWORK

GRADUATE
Machine Learning for Signal Processing, Autonomous Decision Making, Hybrid Control, MDPs and Reinforcement Learning, Stochastic Control, Optimal Control, Statistical Learning Theory, Random Processes, Nonlinear Control, State Space Control

UNDERGRADUATE
Control Systems, Robotics, Digital Systems Laboratory, Fields and Waves, Microelectronic Circuits, Semiconductor Devices, Power Electronics, Probability, Analog and Digital Signal Processing, Computing Systems

SKILLS

SOFTWARE
C++ • C • Java • MatLab • Python • LaTeX
Mathematica • Photoshop • HTML • CSS

HARDWARE
ROS • Open CV • PHP • Eagle CAD PCB

LANGUAGE
Spanish - Full Professional Proficiency

PROFESSIONAL EXPERIENCE

MICROSOFT SURFACE HUB | Summer Hardware Intern
May–August 2015 | Portland, OR
• Used capabilities studies to improve accuracy of vision system used in the manufacturing process
• Designed a custom testing fixture for the incoming quality control of power supplies

VIEW RAY INCORPORATED | Summer Hardware Intern
May-August 2014 | Oakwood Village, OH
• Worked on a system for MRI targeted radiation therapy to prevent the irradiation of healthy tissues
• Created a fiber optic cable testing box to efficiently measure data flow in the system

RESEARCH

DISTRIBUTED AUTONOMOUS SYSTEMS LAB | Researcher
May 2017–Present | Champaign-Urbana, IL
• Designed a multi-agent planning algorithm for robotic weed killing, with an associated simulation framework including a realistic weed growth model
• Incorporated a real-time weed growth prediction strategy using Evolving Gaussian Processes (E-GP), enabling proactive planning
• Oversaw experiments performing robotic weed counts in real agricultural fields

PUBLICATIONS

[1] W. McAllister, D. Osipychev, G. Chowdhary, and A. Davis. Multi-agent planning for coordinated robotic weed killing. In *Intelligent Robots and Systems (IROS), 2018 IEEE/RSJ International Conference on*. IEEE, 2018.

[2] W. McAllister, D. Osipychev, G. Chowdhary, and A. Davis. Agbots: Weeding a field with a team of autonomous robots. *Computers and Electronics in Agriculture*, 163:104827, 2019.

[3] W. McAllister, J. Whitman, A. Axelrod, J. Varghese, A. Davis, and G. Chowdhary. Agbots 2.0: Weeding denser fields with fewer robots. *Robotics: Science and Systems Foundation*, 2020.

TEACHING

UNIVERSITY OF ILLINOIS | Graduate Teaching Assistant
August 2016 - May 2018 | Champaign-Urbana, IL
• Fields and Waves I (ECE329) with Dr. Lynford Goddard
• Principles of Experimental Research (ECE446) with Dr. Lynford Goddard
• Digital Signal Processing (ECE310) with Drs. Yoram Bresler and Stephen Levinson

AWARDS

2018	Shun Lien Chuang Memorial Award in ECE	Top 1/503
2016	Highest Honors	GPA >3.8/4.0
2016	John Bardeen Award in ECE	Top 1/2500
2014-2020	Dean's List	Top 20th Percentile

SOCIETIES

2016	Tau Beta Pi Engineering Honor Society	Top 12the Percentile
2015	Etta Kappa Nu IEEE Honor Society	Top 25th Percentile