

# Wyatt McAllister

wyattsmcall1@me.com | 512.638.3717

## EDUCATION

### UNIVERSITY OF ILLINOIS

#### PH.D. IN ELECTRICAL ENGINEERING

May 2020 | Urbana-Champaign, IL

Conc. in Control and Data Science

College of Engineering

Cur. Cum. GPA: 4.0 / 4.0

### UNIVERSITY OF ILLINOIS

#### MS IN ELECTRICAL ENGINEERING

May 2018 | Urbana-Champaign, IL

Conc. in Control and Data Science

College of Engineering

Cum. GPA: 4.0 / 4.0

### UNIVERSITY OF ILLINOIS

#### BS IN ELECTRICAL ENGINEERING

May 2016 | Urbana-Champaign, IL

Conc. in Control Systems

College of Engineering

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

### ADVANCED CONTROLS RESEARCH LAB | RESEARCHER

August 2016–May 2017 | Champaign-Urbana, IL

- Created a ROS software interface for the Automation Supporting Prolonged Independent Residence for the Elderly (ASPIRE) program

## PUBLICATIONS

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

## 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 12th Percentile
2015	Eta Kappa Nu IEEE Honor Society	Top 25th Percentile