

Dr. Wyatt McAllister

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EDUCATION

UNIVERSITY OF ILLINOIS

PH.D. IN ELECTRICAL AND COMPUTER ENGINEERING

May 2020 | Urbana-Champaign, IL
Conc. in Distributed Autonomous System
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. 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.
- [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
2014-2016	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