

# ANDREW S. MORGAN

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ANDREW.MORGAN@YALE.EDU

## EDUCATION

YALE UNIVERSITY – NEW HAVEN, CT (STARTED AUG, 2017)

- Pursuing **DOCTOR OF PHILOSOPHY DEGREE IN ROBOTICS (DEPARTMENT OF MECHANICAL ENGINEERING AND MATERIALS SCIENCE)**
- Cumulative GPA: **4.0/4.0**

YOUNGSTOWN STATE UNIVERSITY – YOUNGSTOWN, OH (COMPLETED MAY, 2017)

- Received **TWO HONORS DEGREES: BENG IN COMPUTER ENGINEERING; BS IN COMPUTER SCIENCE**
- Cumulative GPA: **3.98/4.0**

## WORK EXPERIENCE

**3D PRINTING OUTREACH INSTRUCTOR FOR YOUNGSTOWN BUSINESS INCUBATOR.** Youngstown, OH (08/16 – 07/17; variable summer weeks)

- Develop a curriculum for High School students to learn the business side of 3D Printing
- Inform students of the capabilities of a rapidly growing technology - additive manufacturing
- **RELATED SKILLS:** 3D Printing, Teaching, Plan Management, Public Speaking

**AUBURN REU ON SMART UAVs.** Auburn University. Auburn, AL (05/16 – 07/16; summer semester)

- Develop new technologies associated with “see and avoid” strategies and recovery systems
- Worked towards two publishable papers and presentations for later representation of my work
- **RELATED SKILLS:** Computer Vision, C++, Embedded Systems, OpenCV, Academic Writing, Project Coordination

**HONORS ENGINEERING TEACHING ASSISTANT / ENGINEERING LAB MANAGER.** Youngstown, OH (07/14 – 06/16)

- Aid students in the understand of fundamentals learned throughout their coursework
- Develop student mentor relationships with incoming freshman honor students
- **RELATED SKILLS:** Microsoft Products, 3D Printing, Leadership, MATLAB, Solid Modeling, Project Coordination

**TEST ENGINEERING CO-OPERATIVE.** ABB Inc. Wickliffe, OH (05/15 – 08/15; summer semester)

- Test ABB Power Systems components and modules for corresponding tasks
- Organize and coordinate co-op fundraising WE CARE charity event
- **RELATED SKILLS:** Microsoft Products, C, C++, Cisco Networking, Communications, Event Planning

## AWARDS/HONORS

- Youngstown State University Scholars Program (full 4-year academic scholarship based on outstanding academic achievement)
- National Science Foundation Graduate Research Fellow 2019 (04/09/2019)
- National Science Foundation GRFP Honorable Mention 2017 (03/17/2017)
- Tau Beta Pi Graduate Fellow 2017 and Tau Beta Pi Scholar 2016 (04/07/2016)
- Barry M. Goldwater Scholar 2016 (03/31/2016)
- Ohio House of Representatives & Ohio Senate Recognition Awards (07/13/2016)

## PUBLICATIONS

**Refereed Journal Articles (J), Refereed Conference Papers (C), Magazine Articles (M), and Provisional Patents (P):**

- J1. Meyers, K., Morgan, A. S., and Conner, B. “Using 3D Printing to Understand the Design Iteration Process”. *Global Journal of Engineering Education*, Vol. 18, Issue 1, 2016.
- J2. Morgan, A. S., Jones, Z., Chapman, R., and Biaz, S., “An Unmanned Aircraft “See and Avoid” Algorithm Development Platform using OpenGL and OpenCV”, *Journal of Computing Sciences in Colleges*, Consortium for Computing in Colleges, Vol. 33, No. 2, pp. 229-236, 2017.
- J3. Hang, K., Morgan, A. S., and Dollar, A. M., “Pre-Grasp Sliding Manipulation Planning of Thing Objects Using Soft, Compliant, or Underactuated Hands”, *IEEE Robotics and Automation Letters*, Vol. 4, No. 2, pp. 662-669, 2019. **Nominated for best paper in manipulation (ICRA).**
- J4. Sintov, A., Morgan, A. S., Kimmel, A., Dollar, A. M., Bekris, K. E., and Boularias, A., “Learning the Dynamics of an Underactuated Adaptive Hand”, *IEEE Robotics and Automation Letters*, Vol. 4, No. 2, pp. 1287-1294, 2019.
- J5. Spiers, A., Morgan, A. S., Srinivasan, K., Calli, B., and Dollar, A. M., “Using Variable-Friction Finger Surfaces and Proprioceptive Sensing to Classify Objects during Robotic Within-Hand Manipulation”, *Transactions on Haptics*, 2019. (In Review)
- C1. Morgan, A. S., Sharif, B., and Crosby, M. “Understanding a Novice Programmer’s Progression of Reading and Summarizing Source Code”. Koli Workshop 2014. Koli, Finland. 2014.
- C2. Meyers, K., Morgan, A. S., and Conner, B. “3D Printing in a First-Year Engineering Design Project”. *American Society for Engineering Education National Conference*, New Orleans, 2016.
- C3. Calli, B., Srinivasan, K., Morgan, A. S., and Dollar, A. M., “Learning Modes of Within-hand Manipulation.” *IEEE International Conference on Robotics and Automation (ICRA)*, Brisbane, Australia, 2018. **Nominated for best paper in manipulation.**
- C4. Morgan, A. S., Bircher, W. G., Calli, B., and Dollar, A. M., “Learning from Transferable Mechanics Models: Generalizable Online Mode Detection in Underactuated Dexterous Manipulation”, *IEEE International Conference on Robotics and Automation (ICRA)*, 2019.
- C5. Bircher, W. G., Morgan, A. S., Hang, K., and Dollar, A. M., “Energy Gradient-Based Graphs for Planning Within-Hand Caging Manipulation”, *IEEE International Conference on Robotics and Automation (ICRA)*, 2019.
- M1. Morgan, A. S., Chapman, R., and Biaz, S., “DIY Drone Recovery Parachute”, *Make Magazine*, Vol. 61, Feb/March Issue, pp. 42., 2018.
- P1. Morgan, A.S., and Kreatsoulas, N., Provisional Patent completed in April 2015, “IV Locking Device”, Patent Application Number: 62/146,434.