# Dexter Duckworth

Curriculum Vitae October 25<sup>th</sup>, 2014

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#### Education

**Degree** B.S., Computer Engineering Mississippi State, MS

**Expected Graduation** May 2015 **Current GPA** 3.89/4.00

**University** Mississippi State University

### **Publications**

Wuisan, S., **Duckworth, D.**, Cogley, B., Henkel, Z., and Bethel, C. L., "Therabot: The Initial Design of a Robotic Therapy Support System," *10th IEEE/ACM International Conference on Human Robot Interaction (HRI 2015)*. Portland, OR. March 2-5, 2015. Under Review.

Lalejini, L., **Duckworth, D.**, Sween, R., Bethel, C., Carruth, D., "Evaluation of Supervisory Control Interfaces for Mobile Robot Integration with Tactical Teams," *2013 IEEE Workshop on Advanced Robotics and its Social Impacts (ARSO)*, 11-13 September, 2014.

**Duckworth, D.**, Shrewsbury, B., and Murphy, R. R., "Run the Robot Backward: Lessons Learned in Nuclear Forensics," *11<sup>th</sup> IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR 2013)*, Linköping, Sweden, October, 2013.

#### Awards and Honors

- Bagley Engineering Undergraduate Poster Session Distinguished Award (2014)
- Bagley Engineering Undergraduate Student Publication Award (2013)
- Phi Kappa Phi Honors Society Member (2013-Present)

- Presenter at Computing for Disasters REU Poster Session (2013)
- Presenter at Safety, Security, and Rescue Robotics Conference (2013)
- Shackouls Honors College Member (2011-Present)

## Research Experience

Lab Social, Therapeutic, and Robotic Systems (STaRS) Lab Mississippi State University

Mentor Dr. Cindy Bethel

Membership January 2012 - Present

Activities Project lead on the robot intent project, which involved programming an autonomous robot to

display pending actions and to accept override commands from a user. Hardware and software work on the Therabot project, the goal of which is to design a life-like, intelligent animal robot that can be used for therapeutic support. Project Lead on the SWAT Autonomy Project funded by

Army Research Labs.

Lab Center for Advanced Vehicular Systems (CAVS) Mississippi State University

Mentor Dr. Daniel Carruth, Dr. Cindy Bethel

Membership November 2013 - May 2014

**Activities** Performed software development that integrated the Robot Operating System (ROS) with a sim-

ulation environment to create a virtual robotic testbed environment.

Lab Center for Robot-Assisted Search and Rescue (CRASAR) Lab Texas A&M University

**Mentor** Dr. Robin Murphy

Membership June 2013 - August 2013

**Activities** Analyzed radiological sensor data from a live nuclear field exercise and used the results to design

a robot sensor payload for the localization of radiation. The findings were presented at the SSRR

2013 conference.

## **Employment**

Job TitleInformation AssistantEmployerMississippi State HousingDatesJanuary 2012 - December 2013

**Duties** Provided information to students and acted as a liaison between residents and housing staff.

Job Title Tutor

**Employer** Mississippi State Student Outreach

Dates January 2013 - May 2013

**Duties** Tutored students in Calculus, Physics, and Electronic Circuits.

### Service

Activity SWAT Training Participant

Dates November 2013 - Present

**Description** Played the part of a criminal in a training exercise by the Starkville SWAT team in coordination

with the STaRS lab. Actively develop hardware and software testing in monthly SWAT training

exercises.

### Skills

Python	Three years of experience with Python applied to research robots such as the Turtlebot2.
ROS	Experience with the use of the Robot Operating System (ROS) in a laboratory setting to build projects and integrate them with RosPy.
Git	Git version control software as a project lead to manage project source code with oversight of eight members of the development team.
C/C++	Experience with Arduino-based C and the use of C/C++ as part of Operating System Design.
Web	Experience with PHP, HTML/CSS, and SQL for the design of a web-based inventory management systems for the STaRS lab.
Soldering	Four years of experience with both surface-mount and through-hole soldering.

## **Professional Memberships**