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EDUCATION

University of California at Berkeley   Berkeley, CA
Currently working toward a Ph.D. in EECS   matriculated August 2015

University of Tennessee at Chattanooga   Chattanooga, TN
Bachelor of Science: Electrical Engineering, summa cum laude   May 2015
Concentration: Robotics
Honors Thesis: Fuzzy Logic Control System for a Robotic Platform
GPA: 4.0

PROFESSIONAL EXPERIENCE

Graduate Researcher, Biomimetic Millisystems Laboratory, University of California at Berkeley, June 2015 – December 2015 & January 2017 - Present
- Researcher at Biomimetic Millisystems Laboratory
- Conducting research on cooperative righting behaviors and under-actuated mobile manipulation
- Team member for National Science Foundation project for Using Multi-Robot Enabled Dexterous Locomotion to Search for Victims in Disaster Areas

Graduate Researcher, Hybrid Systems Laboratory University of California at Berkeley, January 2016 – December 2016
- Derived optimal controller for guaranteeing safety under probabilistic disturbances
- Mathematically modeling human behavior using economic/cognitive science principles of "noisy rationality"

Undergraduate Research, University of Tennessee at Chattanooga, August 2014 – May 2015
- Conducted independent research on fuzzy controllers in robotics education
- Prepared and published research thesis at IEEE conference

Research Intern, University of Maryland REU, College Park, Maryland, Summer 2014
- Assembled miniature robotic platform with novel tail actuator
- Programmed functional nonlinear control system
- Wrote paper: *Precise Yaw Rotation and Stabilization Using Closed Loop Control of Inertial Tail Actuators*

UTC Robotics Team, IEEE Hardware Competition**,** 2013 – April 2015
- Organized navigation and locomotion subsystem as technical lead
- Designed line following algorithm
- Researched, designed, and assembled three locomotion prototypes
- Placed fourth in 2014 Southeast IEEE Hardware Competition
- Developed PID control system for locomotion
- Helped troubleshoot starting system

LEADERSHIP

Officer, **Electrical Engineering Graduate Student Association,** University of California - Berkeley, August 2016 - Present
- Organized and re-constructed graduate student lounge
- Helped department in new graduate student orientations with expertise on advising
- Coordinated three yearly events
- Organized weekly events for CITRIS initiative robotics researchers that promoted collaboration and scientific community

President, **Pi Mu Epsilon Mathematics Honors Society,** University of Tennessee at Chattanooga, Spring 2014 – May 2015
- Coordinated meetings
- Promoted interest in mathematics
- Organized Project Euler Tournament in cooperation with Computer Science Club

Vice President, **IEEE Chapter,** University of Tennessee at Chattanooga, Spring 2014 – May 2015
- Planned semester events for weekly meetings
- Taught seminars to promote interest in embedded systems
- Organized robot-building hack-a-thon

Vice President, **Pi Mu Epsilon Mathematics Honors Society,** University of Tennessee at Chattanooga, Spring 2012 - Spring 2014
- Promoted involvement in society

Build Mentor, **First Tech Challenge**, Chattanooga, Tennessee, 2011-2012

Volunteer Referee, **First Lego League,** Chattanooga, Tennessee, 2013

HONORS AND AWARDS:

- 2015 Outstanding Senior Award: Electrical Engineering
- 2014 Lukens Award
- 2014 Mary Alice McBrayer Engineering Award
- 2013 James S. Kent Electrical Engineering Award
- 2012 John W. Jayne Memorial Mathematics Award
- 2012 Ryan Brackett Award for student with highest grade point average
- 2011 Mary Alice McBrayer Engineering Award
- Dean's List: all semesters
- Provost's Scholarship (Four Years) at the University of Tennessee at Chattanooga

MEMBERSHIPS

- **Institute of Electrical and Electronics Engineers**, 2012 - Present
- **Tau Beta Pi Engineering Honor Society,** 2013 - Present
- **Pi Mu Epsilon Mathematics Honors Society,** 2012 - Present

PUBLICATIONS

Pending: *Precise Yaw Rotation and Stabilization Using Closed Loop Control of Inertial Tail Actuators*

RELATED COURSEWORK

- Three-dimensional Modeling
- Calculus I, II and III
- Electrical Circuits I and II and laboratory
- Vector Statics
- Elementary Linear Algebra
- Engineering Programming
- Dynamics
- Differential Equations
- Principles of Physics: Electricity and Magnetism and laboratory
- Digital Electronics and laboratory
- Introduction to Engineering Design
- Principles of Physics: Optics and Modern Physics
- Signals and Systems
- Analog Electronics and laboratory
- Electromagnetic Fields and Waves
- Electrical Energy Conversion
- Electrical Machinery Laboratory
- Fluid Mechanics
- Introduction to Probability and Statistics
- Advanced Electronics and laboratory
- Modern Control Systems Analysis and Design
- Power Systems Analysis and Design
- Interdisciplinary Design
- Mathematical Statistics
- Microprocessors Applications
- Analog and Digital Communications
- Linear Controls and Drives Laboratory
- Departmental Thesis
- Artificial Neural Networks
- Techniques of Applied Mathematics

RESEARCH INTERESTS

Robotics
Intelligent Controls
Embedded Systems
Algorithms and Computer Science
Computer Simulation