

Christina M. Lucas

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Education

University of Cincinnati (UC), Cincinnati, Ohio

Masters of Science in Mechanical Engineering, Expected Graduation: June 2013

Florida Institute of Technology (FIT), Melbourne, Florida

Bachelor of Science in Mechanical Engineering, May 2011

Credits Earned: 132, GPA: 3.28

▪ Relevant Coursework:

- Mechatronics
- Control Systems
- Mechanical Vibrations
- Computer Aided Engineering
- Solids Modeling
- Mechanics of Materials
- Material Science

- Senior Design Project: Tactical Reconnaissance Applications Platform – TRAP
(A Military Mobile Robot for Battlefield Use)

Work Experience

Graduate Research Assistant – University of Cincinnati

July 2011 – Current, Center for Intelligent Maintenance Systems at UC, Cincinnati, OH

Current working on the following projects:

- "Goodyear Smart Tire" with Goodyear
 - Developing statistical model regression for condition monitoring
- "Prognostics and Health Management in Alstom Transport" with Alstom (Spain)
 - Signal Processing of current
 - Feature Extraction
- "Prognostics and Health Management of Alstom Point Machines" with Alstom (France)
 - Signal Processing of current and voltage
 - Feature Extraction

Robotics Lab Research Assistant – FIT Work Study Program

September 2008 – May 2011, Robotics and Spatial Systems Lab at FIT, Melbourne, FL

- Develop industrial, autonomous and research robots
- Design and fabricate six-legged robotic walking machine, SphereWalker

Machinist – FIT Work Study Program

January 2008 – May 2008, FIT Machine Shop, Melbourne, FL

- Work with ProEngineer and MasterCam software to run CNC milling machine
- Manufacture metal parts for senior design teams, professors and outside companies

Mechanical Technician - Summer Internship and during school breaks

July 2005 – May 2011, Black Bay Technologies, Tarpon Springs, FL

- Assist engineers in developing and fabricating prototypes of electric vehicles
- Fabricate parts, assemble subassemblies, assist with wiring, prepare parts drawings
- Create engineering reference center and organize documentation
- Assist with trade show preparation and show activities
- Create company website in Publisher

Patents and Publications

- Lucas, C., Larochelle, P., Lee, G., Mori, J., Scully, C. (2010). **SphereWalker**. 2010 Florida Conference on Recent Advances in Robotics, University of North Florida, May 20-21.
- Lucas, C., Larochelle, P., Lee, G., Mori, J., Scully, C., Slate, J., Zimmerman, O. Patent Application for a **Spherical Motion Robotic Walking Machine**, July 2010

Skills

- ProEngineer
- MasterCam
- Basic ANSYS, C++, and MATLAB
- Microsoft Office

Honors/Awards

- Outstanding Junior Mechanical Engineering, 2009-2010
- Women in Defense Scholarship Award, 2009
(http://www.fit.edu/newsroom/news/3636/student_receives_women_in_defense_award)
- Society of Women Engineers Scholarship Award, 2008
- Dean's List Fall 2008

Organizations

- American Society of Mechanical Engineers Student Chapter
 - Vice President 2009 – 2010
 - Secretary 2007 – 2009
- Society of Women Engineers, Member 2007 – Present
- Women in Defense (National Defense Industrial Association), Member 2009-Present

Volunteer Work History

- Florida Blood Services, Melbourne, FL, active blood donor
- Daily Bread Inc, Melbourne, FL

Hobbies

- Jewelry making