Jackson J. Graham

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EDUCATION

University of Florida, Gainesville, FL

Master of Science, Mechanical Engineering, December 2014
- Designed and manufactured a prototype for an emergency braking device for tractor trailers
- Led a team to design and manufacture an autonomous boat with a novel rim driven propulsion system that earned second place in the 2014 AUVSI RoboBoat Competition

Bachelor of Science, Mechanical Engineering, December 2012
- Researched the use of graphical processing units to greatly reduce computational times in large multi-dimensional biomechanics problems in MATLAB.

United States Army Ordinance Center and Schools, Aberdeen Proving Ground, MD

Wheeled Vehicle Mechanic Training, February 2005
- Received an additional skill identifier for electrical systems repair

WORK EXPERIENCE

Professor of Practice, Utah State University – Logan, UT, January 2016 – Present
- Develops and teaches the Senior Capstone Design course

Lab Engineer/Instructor, Utah State University – Logan, UT, March 2015 –December 2015
- Developed new laboratory experiments to reinforce fundamental mechanical engineering concepts and enhance user interactivity
- Worked to revamp the current computer aided graphics course to focus on design and on using CAD software to effectively communicate ideas graphically to others
- Maintained all undergraduate mechanical engineering labs to ensure that all laboratory equipment is up to date and functional, laboratory expendable materials are in constant supply, and that the laboratory space is organized and safe

Lab Instructor, University of Florida – Gainesville, FL, January 2013 – March 2015
- Taught a laboratory session on rapid prototyping, subtractive rapid prototyping, and 3D scanning to approximately 400 undergraduate engineering students per semester
- Maintained all lab equipment and ensures that laboratory materials and tooling are in constant supply

S650 Base Engine Performance Development Intern, John Deere – Waterloo, IA, May – August 2011
- Created DOEs and conducted engine dynamometer tests to develop a model to predict and compensate for temperature based fueling errors
- Obtained experience engineering products in a large scale agricultural and construction equipment company

Trail Crew Technician, U.S. Forest Service – Moran, WY, June – August 2010
- Maintained and constructed trails using only hand tools and explosives in the Teton Wilderness

Wheeled Vehicle Mechanic, United States Army – Europe and the Middle East, August 2004 – February 2008
- Performed 90 percent of all road and brake tests on 1st Military Inteligence's fleet
- Lead mechanic in troubleshooting vehicle faults

Machinist Intern, Florida State Physics Department Machine Shop – Tallahassee, FL, January – May 2004

- Designed and manufactured a sterling engine using mills, lathes, and other machines

PUBLICATIONS AND CONFERENCE PROCEDINGS

- **Graham J.,** Hurd R., &Truscott T., "Adding a New Dimension to a Traditional Conduction Lab," 2016 *Rocky Mountain ASEE Conference,* Cedar City, UT, 30 September – 01 October 2016.
- **Graham J.** & Villanueva I., "A flipped classroom and distance education approach to enhance engineering professional competencies in a freshmen engineering graphics and design course," *85th Annual Pacific Northwest ASEE Conference,* Boise, ID, 31 March – 02 April 2016.

AWARDS

RoboBoat Innovation Award

- Received an award for outstanding hull form and propulsion system design, 2014

Dwight David Eisenhower Transportation Fellowship

- Received a fellowship to continue the development of an emergency braking device for tractor trailers, 2013

SKILLS

Manufacturing

- Experienced in milling various materials using a 4-axis Rolland desktop CNC machine
- Experienced in creating parts using 3D printers
- Skilled in welding steel and aluminum using both MIG and TIG welding machines
- Skilled in milling and turning steel, aluminum, and some plastics

Software

- Certified SolidWorks 2016 Professional and Accredited Educator
- Flow Simulation add-in for SolidWorks 2016
- Computer Programming using MATLAB 2016
- Computer Programming using LabVIEW
- Microsoft Word, Excel, and PowerPoint