

Joe McGarry

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| EDUCATION | University of Central Florida <i>Doctor of Philosophy, Mechanical Engineering</i> GPA: 3.625 PERL Lab Manager | Orlando, FL Graduation: December 2017 |
| | Old Dominion University <i>Master of Science, Aerospace Engineering</i> GPA: 4.0 PERL Lab Manager Commonwealth Graduate Engineering Program Graduate Assistant Member of Golden Key International Honor Society | Norfolk, VA Graduated: December 2014 |
| | Grand Valley State University <i>Bachelor of Science in Engineering, Mechanical Engineering</i> GPA: 3.517 Dean's list Fall 2009, Winter 2010, Fall 2010, Fall 2011, Spring 2012, and Winter 2013 Member of Tau Beta Pi, Engineering Honor Society Secretary of Alpha Sigma Phi fraternity 2010 Member at Large of Alpha Sigma Phi fraternity 2011 Special Events Chairmen of Alpha Sigma Phi fraternity 2011 | Allendale, MI Graduated: August 2013 |
| EXPERIENCE | Stanley InnerSpace <i>Engineering Intern</i> Create 3D CAD models of complex parts and assemblies Manage prototype testing of concept products Approve concept designs or recommend design changes based on test results Generate ECO Requests | Grand Rapids, MI May 2011- January 2013 |
| Projects | Pulse Detonation Engine Flow Analysis Designed and manufactured a Pulse Detonation Engine with optically clear sections that allow for analysis with Particle Image Velocimetry and the Schlieren Method. The PDE utilizes a slot jet to trip the laminar flame front and induce turbulent combustion. Through the use of the analysis methods, the characteristics of the underlying physics of the combustion flow are resolved. | August 2014-Present |
| | Co-Flow Axial Nozzle Designed and manufactured a dual concentric nozzle for Edwards Air Force Research Laboratory capable of producing separate, uniform outlet velocity profiles for the inner and outer flows through use of fifth order polynomial nozzle contours | December 2013-August 2014 |
| | Variable Capacity Multi-Zone Heat Pump Participated in a six man senior project team with the objective to design and develop a heat pump that could heat or cool five separate zones by rerouting the flow of refrigerant, utilizing the zone coil as an evaporator or condenser coil as needed. Primary project responsibilities pertained to controls and system circuitry | January 2013- August 2013 |
| | Semi-Truck CFD Modeled a semi-truck and ran simulations to analyze the effect of aerodynamic add-ons to the drag coefficient and gas mileage of the semi-truck | April 2013 |
| SKILLS | Microsoft Word, Excel, Power Point Programming in C, Pro E, ANSYS, Digital Systems, SolidWorks, Star-CCM+, Matlab CNC machining | |