

Daniel Schwartz

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Education:

University of Arkansas

Bachelor of Science in Electrical Engineering

Cumulative GPA 3.8

Graduation: May 2016

Masters of Science in Electrical Engineering

Cumulative GPA 3.8

Expected M.S.E.E. Graduation: May 2018

Work Experience:

P.O.E.T.S. Graduate Research Assistant

Dynamometer "Testbed 2" Technical Upgrades

Major Advisor: Dr. Juan Carlos Balda

May 2016 – Present

- Power Optimization of Electro-Thermal Systems is a research center devoted to increasing the power density of mobile electrified systems
- Increased testing capabilities for hardware validation of electric and hybrid vehicle powertrains by incorporating EPA driving schedules and vehicle model to predict torque requirement for the selected vehicle
- Devised a modular setup allowing "plug and play" type testing for vehicle powertrain subsystems
- Integrated OPAL-RT real time simulator with NI LabVIEW data acquisition system to simulate vehicle dynamics in real time
- Capability of testing systems within 10 kW to 100 kW power range

NASA Intern - Houston, Texas

Intern at NASA's *Johnson Space Center in Houston, Texas* - Division: ER4, Engineering Robotics,
Assigned to the design team responsible for the Resource Prospector Rover (RP-15)

Summer 2015

- Designed a solar panel simulator in NI LabVIEW that controls a power supply to mimic the power output of a solar panel array of any size in varying environmental conditions
- Created a maximum power point tracking algorithm for the solar panel converter on the rover
- Selected a DC/DC converter topology best suited for the RP-15 energy storage system
- Produced a data logger program which used a PIC32 microcontroller for the RP-15 battery management system

University of Arkansas Fort Smith, Arkansas

Research Student- NASA Space Grant Consortium

Major Advisor: Dr. Kevin Lewelling

May 2013 – June 2015

- Designed and built a Mars Rover prototype that uses infrared spectrometers to take atmospheric data readings
- Wrote C program to control the rover wirelessly over WIFI connection
- Aided in the design of the circuitry to provide the required power to operate all externally mounted equipment
- Designed all of the external mounts for spectrometer and rover arm in Solid Works

University of Arkansas Fort Smith, Arkansas

Student Worker- Engineering Department

September 6th, 2012– October 17th, 2012

- Designed and built an apparatus to turn a 24 foot diameter revolving stage for a school run theater production in just over 2 months
 - Tested and improved design post construction since time frame did not allow for a multiple revision design
 - Successfully troubleshooted last minute mechanical and electrical issues during dress rehearsal and live performances to ensure safety and functionality
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Leadership Experience

- Education and Outreach Representative for P.O.E.T.S. Student leadership council
 - Chairman of the Greek Life Inner Fraternal Council
 - Treasurer and Historian for the Nu Alpha Chapter of Sigma Nu
 - Grounds crew supervisor for 4-6 workers at the Fort Smith Church League Ballparks
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Skills

- Class 10,000 and class 100 clean room experience
- MATLAB/SIMULINK, LabVIEW, RT-Lab real time simulation software, Cadence PCB layout, PSPICE, C, assembly, Java, Solid Works