

Name: Bordelon, Allen

Education Institution: Louisiana State University

Major/Degree/Grad Year: Electrical Engineering / BS 2012 and Computer Engineering / BS 2012

Mentor: Andy Crocker / Dynetics, Inc.

Org Code/Branch: Dynetics, Inc. / Space Division



Research and Experience

- **LSU LaACES – August 2009 to present – propose, Design, and**
- **build scientific payloads for sounding balloons and HASP**
- **Iberville Parish School Board – January 2008 to present – stage director, camp counselor, Lego Robotics coach**

Membership and Activities

- **IEEE**
- **LSU IEEE Robotics Team**
- **LaACES**
- **MARSLIFE**
- **FIRST Lego Robotics Coach**
- **HAM radio operator**

Title of Poster: Rocket City Space Pioneers: X Prize Test Bed

Abstract:

The Rocket City Space Pioneers is a team of companies formed with the goal of sending a robotic lander to the moon and deploying a rover to traverse the lunar surface to compete for the Google Lunar X Prize. We have designed an X Prize Test Bed to test the technologies used on the lunar lander design and verify the integration of the subsystems. The modular test bed provides long-duration flight in a lunar gravity-simulated environment with three degrees of freedom while introducing minimal external force. The primary subsystems to be tested include propulsion, GNC, and structures, as well as subsystem integration.

Name: Davison, Peter
Education Institution: Princeton University
Major/Degree/Grad Year: Mechanical and Aerospace Engineering / BSE 2012
NASA Academy Mentor: Marty Kress
Project Mentor: Andy Crocker / Dynetics, Inc.
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Research and Experience

- **Junior Independent Work – Princeton University (2011)**
“Spacecraft Attitude Determination via Recursive Direction Cosine Matrix Estimation”
 - **Researched, developed and simulated a novel recursive attitude estimation technique that uses a constrained optimization algorithm to estimate DCM elements**
- **Mechanical & Aerospace Engineering Research Assistant – Princeton University (2010)**
High Contrast Imaging Laboratory
 - **Worked as part of Princeton’s team investigating direct imaging of extra-solar planets for the NASA Terrestrial Planet Finder (TPF) mission using a coronagraph and MEMS deformable mirrors for wavefront control**
- **Microsatellite Team Design Project – Princeton University (2010)**
 - **As part of a space systems design course developed a concept microsatellite design for a Technology Demonstration Mission for coronagraph and deformable mirror hardware.**
 - **Project design presented to *Team X* at NASA JPL.**

Membership and Activities

- **Member, AIAA: 2009 – Present**
- **Princeton University Men’s Rugby Club**
 - **Co-Captain: Spring, 2011 – Present**
 - **President: Fall, 2010 – Present**
- **Eagle Scout: Boy Scouts of America**
 - **March, 2005 – Present**

Honors and Awards

- **AIAA Foundation Ellis F. Hitt Digital Avionics Scholarship (2011)**
- **Raytheon Scholars Program (2009-2011)**

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Name: Helmeid, Evan R.

Education Institution: Purdue University

Major/Degree/Grad Year: Aeronautics and Astronautics Engineering / BS 2011

Mentor: Andy Crocker / Dynetics, Inc.

Org Code/Branch: Dynetics, Inc. / Space Division



Research and Experience

- **NASA Langley Research Center – LARSS: June to August 2010**
 - **Increase the capabilities of the Aircraft Noise Prediction Program (ANOPP) to include effects of counter-rotating propfans by developing FORTRAN code and updating documentation**
 - **Create an interface between ANOPP and an efficiency program from Georgia Institute of Technology**
- **NASA Langley Research Center – USRP: June to August 2009**
 - **Transfer the Aircraft Noise Prediction Program Theoretical Manual from type-written text to LATEX**
 - **Update, validate, and verify accompanying FORTRAN code**

Membership and Activities

- **Virtual Community COHORT II; NASA Student Ambassador**
- **Purdue Sigma Gamma Tau, National Aerospace Engineering Honor Society; President**
- **Purdue FIRST Robotics Program; Public Relations Director, Mentor**
- **Purdue Emily Mauzy-Vogel Leadership Development Conference; Team Lead**
- **Purdue Engineering Projects in Community Service; Team Lead, Liaison**

Honors and Awards

- **AGI University Grant Competition – 1st Place**
- **ATK Thiokol Propulsion S.P.A.C.E. Award**
- **Boeing Scholar**
- **Brunswick Corporation Scholar**
- **Purdue Academic Success Award**
- **Purdue Dean's List**
- **Purdue Semester Honors**

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Name: Holland, Timothy J.

Education Institution: University of North Dakota

Major/Degree/Grad Year: Space Studies / MS 2012

Syracuse University - Aerospace Engineering / BS 2010

Mentor: Andy Crocker / Dynetics, Inc.

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Research and Experience

- **University of North Dakota, August 2010 – Present**
Design Engineer - Directed by: Pablo de Leon, P.I. Collaborated with a team to design and build a lunar habitat that incorporated the use of a suitport system between a rover-base-spacesuit system. Designed parts using SolidWorks, and built parts using composite materials, and worked with contractors to build more parts.
- **Syracuse University, May 2009 – May 2010**
Research Assistant - Directed by: Dr. Mark Glauser. Designed and built a modular acoustic wind tunnel at Syracuse University which will be used to study noise vibration on wind turbine blades.

Membership and Activities

- **American Institute of Aeronautics and Astronautics**
- **United States of America Triathlon Association**
- **Explorers Club of New York City**
- **Margate City Lifeguard Association**
- **Students for the Exploration and Development of Space**
- **Syracuse University Division I Swimming**
- **University of North Dakota Division I Swimming Assistant Coach**

Honors and Awards

- **Eagle Scout Award, The Boy Scouts of America March 2006**
- **South Jersey Chiefs' Association Lifeguard Champion August 2008**

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freedom while introducing minimal external force. The primary subsystems to be tested include propulsion, GNC, and structures, as well as subsystem integration.

Name: Hooks, Joshua

Education Institution: University of Washington

**Major/Degree/Grad Year: Mechanical Engineering / BS
2012**

Mentor: Andy Crocker / Dynetics, Inc.

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Research and Experience

- **Romac Industries Incorporated, Mechanical Engineering Intern
(September, 2010 – May, 2011)**
 - **Designed, tested, and improved Cast Lug repair clamps used to mend splits and holes in steel, cast iron, asbestos cement, plastic and other types of pipe.**
 - **Prepared NSF 61 approval for all Romac products.**
 - **Worked on miscellaneous product testing, product design, report preparation and presentation of test reports**
- **Research assistant for Professor Weichih-Wang, Department of Mechanical Engineering, University of Washington
(March, 2009 – June, 2009 and January, 2010 – present)**
 - **Carried primary responsibility for assembling and testing a metal detector using fiber optic technology.**
 - **Prepared final report summarizing state of research and challenges remaining in prototype development**
 - **Acquired experience and familiarity in laboratory protocol, setting and meeting deadlines, and preparing progress reports.**

Membership and Activities

- **Comets Track – Coach: summer of 2008**

Honors and Awards

- **Dean's list Autumn quarter 2008 and Autumn quarter 2009 through Spring quarter 2011.**
- **Accepted into the mechatronics focus (2011)**

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