ANDREW LANSEY

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EDUCATION

Master of Engineering, Mechanical and Aerospace Engineering, January 2012
Rutgers University – New Brunswick, NJ
Coursework: Methods of Applied Mathematics, Experimental Fluids, Conduction Heat Transfer, Fluid Mechanics, Mechanics of Materials, Analytical Dynamics, Random Vibrations, Compressible Flows, Combustion

Bachelor of Science, Mechanical and Aerospace Engineering, ***Cum Laude***, May 2010
Rutgers University – New Brunswick, NJ
James J. Slade Scholar, Dean's List for 3 semesters
Selected Coursework: Fluid Mechanics, Thermodynamics, CAD, Design of Mechanical Components, Vibrations and Controls, Design of Mechanical Systems, Heat Transfer, Probabilistic Models in Mechanical and Aerospace Systems, Aerodynamics, Aerospace Propulsion, Compressible Fluid Dynamics

FABRICATION AND PROTOTYPING EQUIPMENT

Stratasys FDM-3000 and uPrint SE 3D printers, drill press, band saw, lathe, milling machine, arc and MIG welding

SOFTWARE

Pro-Engineer, SolidWorks, MATLAB, ANSYS, MS Office

RESEARCH AND DESIGN EXPERIENCE

Loud Bicycle June 2012 – Present
Lead Design Engineer

- Developed multiple potential configurations for horn components in consultation with inventor.
- Designed and rapid-prototyped several mechanical designs for an aerodynamic horn housing and mounting hardware.
- Provided engineering support, including working with other engineering consultants, for an on-time and successful Kickstarter funding campaign.

FIRST Robotics Competition January 2012 – Present
Mentor to The Center School Team, Highland Park, NJ
The Center School is for children with learning and behavioral disabilities.

- Teams of high school students hone teamwork skills to build and program robots to perform prescribed tasks against a field of competitors.
- Guided team of 12 high school students in the design and fabrication of a robot to pick up and shoot basketballs, and balance on a bridge in the center of the game court.
- Team was awarded the Rookie Inspiration Award.

Bridge Repair Robotic Components Design and Prototyping Fall 2011
Automated Nondestructive Evaluation and Rehabilitation System (ANDERS) for Bridge Decks
Master of Engineering Project, Professor Jingang Yi, Rutgers School of Engineering

- Designed and prototyped a multiple degree-of-freedom bridge repair sealant delivery system.
- Extensive redesign of robot end effector to improve drill precision while reducing size and weight, and integrating drilling and sealing systems.
- Defended research before research review committee of three department professors.

Review of Orbital Debris Collection and Mitigation 2009 – 2010

James J. Slade Scholar Research Project, Professor Haym Benaroya, Rutgers School of Engineering

- Performed research concerning orbital debris, focusing on a review of the current state of the orbital debris population, collision events, shielding methodology and mitigation concepts.
- Made recommendations for focus of future development in mitigating orbital debris.
- Co-authored report containing this research and recommendations.
- Presented results of research to advisor's research group.

Microelectronics Case Designer 2009 – 2011

Mark Sproul, Manager Engineering Computing Services, Rutgers School of Engineering

- Designed and 3D printed a number of modular cases for small portable digital devices.

Mechanical Design Consultant 2009 – 2011

Team Chucky: Reigning Division World Champion Punkin Chunkin - www.punkinchunkin.com

- Assisted in design of the Chucky 3 torsion pumpkin catapult's throwing arm.
- Researching the aerodynamics of pumpkins.
- Optimizing energy transfer from the throwing arm to the pumpkin.

Tire Gasification System 2009 – 2010

Senior Research Project

- Designed and tested a system to convert used tires to methane, diesel and other fuels together with four other students.

Aerial Photography Assistant Fall 2008 – Summer 2009

Rutgers Center for Advanced Infrastructure and Transportation, Piscataway, NJ

- Trained as operator of blimp-based aerial photography equipment.
- Demonstrated the system for use in monitoring construction, traffic sites and railroad crossings.

Measurement of Vortex Shedding Fall 2008

Experimental Fluids Graduate Course Project

- Measured the vortex shedding off of an aircraft nose section using Particle Image Velocimetry to find ways to reduce drag.

Design Team Leader 2006 – 2009

American Institute Of Aeronautics And Astronautics Club – Rutgers University

Unmanned Air System Competition (UAS) 2008 – 2009

Association for Unmanned Vehicle Systems International (AUVSI)

- Designed and constructed components of an aircraft to carry cameras and electronic equipment for an autonomous flight competition.
- Independently designed a simple, light weight, robust retractable landing gear system for the aircraft.

Aero-Design East Competition 2006 – 2008

Society of Automotive Engineers (SAE)

- Led a team of 15 engineering students in the design and construction of a heavy lifting radio-controlled (RC) aircraft for an international Society of Automotive Engineers (SAE) competition.