NOLAN DOW

2803 Wakefield | Jamison, PA | 215-353-3192 | nolanadow@gmail.com

OBJECTIVE

An aerospace or mechanical engineering position, where I will be able to use my spacecraft engineering experience to work in the aerospace industry.

EDUCATION

B.S. in **Aerospace Engineering**
The Pennsylvania State University

- Graduated May 2014
- Cumulative **GPA: 3.30/4.00**, **Major GPA: 3.60/4.00**
- Graduated on **Dean's List,** 5 semesters

RELEVENT EXPERIENCE

Propulsion Engineering Intern, Firefly Space Systems
Austin, TX July 2014 - Present

- Gained significant experience in design of pressure-fed liquid rocket engines of both kerosene and methane design
- Ignition systems: Designed injection valve network for hypergolic fluids into combustion chamber, and flush/purge system
- Umbilical Systems: Conceptualized and refined umbilical quick-disconnect system for fill-up of propellant tanks
- Reaction Control System: Designed gas-thruster clusters for attitude control, in-flight roll authority and post-stage separation tank settling
- Regularly engaged in design reviews and led component designs from conceptualization through manufacturing

NASA RASC-AL Competitor
Cocoa Beach, FL

- Constructed abstract about Holistic Spacecraft Habitat Design for submission, leading to acceptance into the RASC-AL competition run by NASA. One of only six abstracts accepted by competition judges in the nation.
- Project Leader for the research team representing Penn State at competition. Involved creation of a full design proposal for long-term habitable spacecraft for use in future NASA missions. Presented proposal to panel of industry leaders.

Student Space Program Laboratories

Research group at Pennsylvania State University October 2013-May 2014

- Responsible for CAD design of cube-satellite and manufacture/construction of a sub-scale satellite
- Work on sun-sensor and earth-sensor code for satellite guidance, navigation and control

Pennsylvania State University Aerospace Program

- Experience leading student engineering teams for large-scale design projects, including software engineering for robotics.
- Conducted vibrational analysis testing on complex bodies.
- Winning team of the First (2014) Annual Collegiate Wind-Energy Competition

SKILLS

AutoCAD/Autodesk and Solidworks
Matlab/IGOR and C++ programming
Satellite Tool Kit
COMSOL
MS Office and OSX equivalents

INTERESTS

Judo
Snowboarding
Sailing
Powerlifting

Native English, Fluent in French (Quebec)

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References

Dr. Thomas E. Markusic
Chief Executive Officer and Founder
Firefly Space Systems
512-234-3700 (company phone number)
Thomas.Markusic@fireflyspace.com
CEO and chief engineer of Firefly Alpha engine systems, and my direct supervisor. Former VP of Propulsion at Virgin Galactic, Senior Systems Engineer at Blue Origin, and Director of the Texas Test Site at SpaceX.

Shey Sabripour
Chief Technical Officer
Firefly Space Systems
512-818-6869 (company phone number)
Shey.Sabripour@fireflyspace.com
CTO of Firefly space systems I worked with Mr. Sabripour in relation with Reaction Control Systems for the Firefly Alpha vehicle. Former Director of Spacecraft Design at Lockheed Martin Space Systems Company.

Dr. Dennis McLaughlin
Professor of Aerospace Engineering
The Pennsylvania State University
230 Hammond Building
University Park, PA 16802
814-865-2560
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Penn State professor I assisted, with relation to the manufacturing of wind-energy equipment.

Dr. David B. Spencer
Professor of Aerospace Engineering
The Pennsylvania State University
229 Hammond Building
University Park, PA 16802
814-865-4537
Dbs9@psu.edu
Faculty advisor of the Penn State NASA RASC-AL competition team. My professor for three Aerospace Engineering classes, including Spacecraft Design Projects.

Dr. Robert Melton
Professor of Aerospace Engineering, Director of Undergraduate Studies
The Pennsylvania State University
229B Hammond Building
University Park, PA 16802
814-865-1185
rgmelton@psu.edu
My professor for four Aerospace Engineering classes, including Advanced Orbital Mechanics.