

# Mark Daniel Riley

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**OBJECTIVE** To continue my career in the field of aerospace materials and manufacturing. Specifically interested in the design and fabrication of composite spacecraft structures and mechanisms. Available Feb. 3, 2014.

**PROFESSIONAL Engineer and Machinist at MP Aero, LLC.**

**EXPERIENCE Van Nuys, CA – October 1, 2012-November 18, 2013**

Gained aerospace manufacturing experience at an FAA approved repair station located at the Van Nuys Airport.

- Design – Used SolidWorks to create aircraft parts, assemblies, and tooling.
- Machining – Worked with CNC mills, Mastercam CAM software, and pneumatic hand tools.
- Inspection – Experience using precision measuring equipment including CMM machines and optical comparators. Experience in reading and creating engineering drawings. Familiarized with ISO 9001 and AS9100 Standards and Quality management systems.
- Teamwork – Worked with small and large groups of people to complete quality parts on time.

**EDUCATION Bachelor of Science, Aerospace Engineering – University of Colorado at Boulder**

Graduated May 2012

- Experience in writing requirements, design, fabrication, and testing of a system.
- Integrated multiple structures and mechanisms with various subsystems using a systems engineering approach.
- Gained experience with manufacturing equipment including CNC mills, lathes, band saws, and drill presses for fabrication.
- Developed detailed engineering drawings in SolidWorks.
- Lab work with teams included Designing and fabricating a fiber reinforced composite truss member and testing it to obtain tensile stress and strain data to compare with a theoretical model.

**Composites Fabrication – Cerritos College**

Completed December 2013

- Hands-on training and exposure to composites fabrication in clean room environment.
- Introduced to vacuum bagging techniques and cure processes.
- Familiarized with various materials including pre-preg carbon, kevlar, fiberglass, honeycomb core materials, sealant tape, peel ply, breather fabric, and safety equipment.
- Used various machines and tools including vacuum pumps, industrial ovens, and heat guns.
- Lab activities include lay-up and bagging of pre-preg fiberglass and honeycomb core materials

**RELEVANT**

**COURSES**

Aerospace Materials	-Properties of various aerospace materials & effects of space radiation
Vibration Analysis	-Free and forced vibration of discrete and continuous systems
Structures	-Stress and deformation of space structures and FEM of a truss
Spacecraft Design	-A systems engineering approach to the design of a spacecraft
Thermo & Heat Trans	-Gas dynamics, high-speed vehicle design, and energy analysis
Vehicle Design	-Structures in launch systems and spacecraft subsystems
Project Management	-Explore standards of PM including quality control and procurement

**TECHNICAL**

**SKILLS**

SolidWorks	CATIA	MATLAB
Mastercam X5	Mathematica	Microsoft Office

**INTERESTS**

- Teaching others manufacturing skills such as soldering, milling, and CAD Design.
- Making composite skateboards.
- Learning new skills and working with my hands.