

## Sr. Mechanical Engineer

An highly adaptive Mechanical Engineer with Project Management experience, focusing on design and manufacturing roles of low volume, high value hardware in electric vehicle, space, defense and autonomous applications. Frequently works on cross-disciplinary projects, orchestrating efforts between hardware, electronics, software and managerial staff. Heavy collaborator as well as a strong individual contributor.

## EXPERIENCE

### Senior Mechanical Engineer/Technical Project Mgr

#### -Motiv Power Systems, San Francisco CA

Jan 2013 – Present

- Designed all component mounting and framing hardware on the first CHP approved fully electric school bus.
- Assumed ownership and completed design, procurement and oversaw installation of all mounting and framing hardware for the nation's first fully electric refuse truck, delivered to city of Chicago.
- Designed mechanical enclosures for proprietary electronics to survive road and weather conditions
- Devised and led testing efforts based on MIL-810-F
- Effectively managed the collapse of a major OEM partner across multiple projects, taking on design, procurement, inventory roles abandoned by the group, while simultaneously working with the Executive staff to solicit bids from secondary suppliers, leading to the successful completion of all projects with a minimal impact to schedule.

### Contract Mechanical Engineer

#### -Maury Microwave

Oct 2011 – July 2012

- Designed electro-mechanical components for a new microwave tuner system
- Identified and proposed remedies to critical errors being introduced by faulty prints, material storage, and assembly methods
- Directly assisted the resident project manager with developmental timeline and schedule

### Contract Mechanical Engineer

#### -Goodrich ISR

Sep 2010 – Apr 2011

- Provided Mechanical Engineering Support to the development of critical navigation systems for the GRAIL Lunar Surveyors.
- Led manufacturing and testing efforts of flight hardware.
- Worked directly with the resident Project Manager to identify and remedy critical scheduling issues, addressing them proactively, leading to the recapture of a lagging timeline, preventing an 18 month project delay
- Main POC with customer (JPL/Lockheed Martin) for EIDP efforts, resolving open action items, preparing and submitting documentation, and concluding contractual requirements.

### Contract Mechanical Engineer

#### -Mecha Engineering LLC

Jan 2001–Present

- Widely varied experience in structural design of electromechanical assemblies for defense industry.
- Extremely adaptive to dynamic environments and comfortable with high travel percentages
- Familiar with a wide range of traditional and non traditional manufacturing methods, materials and finishes
- Testing experience with shake and bake, EMI and EMF style testing schemes

## Skills

Solidworks 2013  
SW Simulaton  
PDMWorks  
ProE -Wildfire  
CATIA V5  
Inventor  
ANSYS  
Project

## Design

### Applications

Electric Vehicles  
Reaction Wheel  
Torque Rods  
Prototyping  
Mechanical  
Electromechanical  
Robotics  
Actuators  
Exoskeleton  
GD&T  
Sheet Metal  
Lathed Parts  
Milled Parts  
ASME Y14  
Aquatic ROV  
SLA  
ECM  
Cast Parts  
Injection Molding

## Testing

Benchtop  
Life Testing  
MIL-810  
MIL-461  
Flight Hardware  
Validation

## CAD Experience

- Operating Solidworks since 2000, amassed significant experience in Solidworks with additional experience in Wildfire and CATIA V5, Inventor and Unigraphics. Can quickly adapt to any CAD system.
- Set up full PDM lifecycles in solidworks for several companies, using multiple revision cycles and user access.
- Experience with ANSYS and Solidworks Simulation packages
- Familiar with GD&T practices

## Design & Development Experience

- Wide range of experience in design and detailing for a wide range of manufacturing methods and materials, including lathe, mill, EDM, injection & cast molding, sheet metal and welding
- Successfully contributed to the design of several autonomous, remote operations, and human interactive robotic systems
- Demonstrated history of designing low volume, high value, complex electro-mechanical assemblies to strict quality and reliability standards (space flight qualifications)
- 'Hands on' experience, frequently taking a direct role in assembly and test on most projects working alongside skilled technicians, third party manufacturers, and suppliers
- Familiar with design, testing and validation to strict reliability standards, including space flight hardware
- Demonstrated ability to design and detail complex assemblies, with assembly tolerances less than .005" using GD&T and tolerance stack up methods
- Experienced in creation of part and assembly level detailed drawings for manufacture, managed large assembly files, creating BOM lists, and relating outputs to procurement tasks

## Testing Experience

- Developed and executed product testing procedures to MIL 810 and 461 specs.
- Supervised the execution of life cycle testing procedures to support flight hardware requirements
- Documented, led tiger teams, and implemented corrective actions on abnormalities discovered in testing sequence
- Performed range ballistics testing of less than lethal ordinance and peroxide combustion devices
- Oversaw verification and validation testing of space flight hardware

## EDUCATION & CERTIFICATIONS

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<b>-PMP Certification</b>	Coursework Completed, 2013
<b>Boston University</b>	
<b>-Mechanical Engineering, Master of Science</b>	GPA 3.5/4.0
<b>University of California, Irvine</b>	
<b>-Mechanical Engineering, Bachelor of Science</b>	GPA 3.7/4.0
<b>University of Nebraska, Lincoln</b>	

## ACTIVITIES & AWARDS

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Member, F&AM  
PADI certified  
Vice President, Versailles Homeowner Association  
Participant, Monbusho Exchange Program, Tokyo Japan  
Treasurer, Tau Beta Pi  
Member, Pi Tau Sigma