

Wilson Lam

El Monte CA 91732 • U.S. Citizen • Active Secret Clearance • wilsonganda@gmail.com
Website: wilsonlam.github.io (Website Not Managed)

EDUCATION

University of California Los Angeles, Los Angeles, CA
Master Degree in Mechanical Engineer
Bachelor of Science in Mechanical Engineer

[Sept. 2013 – June 2014]
[Sept. 2009 – June 2013]

PROFESSIONAL EXPERIENCES

[L3HARRIS](#) Sylmar, CA

[Aug. 2016 – Present]

Project Engineer

- Conducted weekly meetings with Navy and reported directly to the program manager on the production line's status. Assign engineering task orders, organized reports, & oversaw the production line supervisors' shop order authorization & closure. Supported production line supervisors & quality leads, to keep them up to speed with production schedule.
- Select & assigned tow arrays for production line supervisors to refurbish modules. Provided GreenBelt process improvement guidance to reduce Takt Time to meet DCMA demands.

Prior Position at L3HARRIS

- **Sensor Engineer & Specialist Engineer** – Obtained GreenBelt training for lean manufacturing. Setup Kaizen events for production workers, management, contracts, and program managers. Created molds, fixtures, and test equipment to improve production yield rate.

Projects & Tasks at L3HARRIS

- Incorporated into a team of multiple electrical engineers as the sole design engineer tasked with designing DC converters & power supplies packaging from ideation to environmental testing and final production.
- Designed and setup test runs with transmitters over 3000V and recorded hydrophone data through LabView or custom made code.
- Designed, prototyped, manufactured, and successfully deployed a 1 mile plus deep sea transducer during sea test to verify FEA dynamic model and obtain TVR curves.
- Create drawings, BOM, work instructions, ATP, and CAD models for production.

[SEAL SCIENCE INC.](#) Irvine, CA

[June 2015 – Aug. 2016]

Mechanical Design Engineer

- Lead gasket and reinforced elastomer (metal insert/fabric layering) designs for major aerospace companies and military application
- Draft project plan, statement of work, and testing procedure for part verification as needed.
- Create engineering change order (ECO), Maintain Bill Of Material (BOM), and ISO 9001 Standards
- Ensure FDA (Food & Drug Administration) CFR (Code of Federal Regulations) Compliance for Material
- Draft Components and Models for Molding and Complete ASME Y14.5M GD&T for Manufacturability
- Perform Advanced Non-Linear Abaqus FEA on characterized compound mixtures under dynamic loads

NASA Orion Spacecraft Forward Fairing Seal Separation Design and Analysis

[June 2015 – Present]

- Advanced FEA for Service Module (SM) and Fairing Separation Design and Validation
- Forward fairing designed to aerospace specifications and industry standards
- Lead system level design of payload to fit and maintain performance structurally, mechanically, and thermally.

NASA Orion Spacecraft Umbilical Seal Design and Analysis

[June 2015 – Present]

- Design for highly dynamic deflection (0.5" to 3" X, Y, & Z relative motion) during launch and extreme temperature during SM and fairing separation.
- Review statement of work, draft project schedule, create models and drawing, perform Advanced FEA for Non-Linear Validation.

SpaceX Dragon High Temperature Ducts**[Oct. 2015 – Feb. 2016]**

- Organize manufacturing procedures for SpaceX high temperature ducts.
- Perform tests under FAA AC 20-135 Flammability Test (Burn Test Performed at 2000°F for 15 minutes on Hyper-Elastic Materials)
- Product design to interface high deflection components to solid surfaces

Navy Ship Pressurized Door**[Sept. 2015 – Feb. 2016]**

- Solidworks to draft CAD model and perform FEA on insert spring (elastic conditions)
- Advance Abaqus FEA on assembly of Solidworks model (contain elastic and inelastic components)
- Draft fixtures for in house welding of mass production components
- Work with vendors on material procurement, mold designs, and experimental testing.

FDA Title 21 CFR Sealing Products**[July. 2015 – Dec. 2015]**

- Design product in Catia and perform advance thermal, pressure, and dynamic loads simultaneously
- Advance Abaqus FEA on silicone rubber with spring insert vulcanized together

Lockheed AC-130 Gunship**[July 2015 – Dec. 2015]**

- Develop gun seal CAD assembly & Abaqus FEA on Multi-Layer Hyper-Elastic-Fabric Materials
- Draft FEA report on pressurized gun seal during deployment and motion

[LEDCONN CORP.](#) Brea, CA**[June 2014 – June 2015]****Project Engineer**

- Setup mass production line in new facility & get line ready for UL Listed induction audit
- Conduct meetings with client and engineers to discuss design projects
- Develop ECO, SOP, CAD drawings, and perform quality control on products
- Generate VBA/C++ Code to get product input from sales team and automatically generate sketches, BOM, and quotes for customer and production team

Prior Position at LEDCONN

Project Specialist – Manage Engineers and machinists for the design, development, and testing of a prototype. Design enhancements / cost reductions trade studies

Projects at LEDCONN

- Communicate with oversea engineers on design and experimental results before mass production.
- Manage project production ranging from material gathering to BOM for project.
- Draft SOP guidelines, GT&D sketches, CAD files, generate FEA (stress, strain, failure, crack propagation, thermal, and optimization [for cost, material, and weight]), CNC files for machinist to manufacture products, and experimental tests.

SMALL ENGINEERING PROJECTS ([PROTFOLIO](#)) (Click on BLUE links to see projects online.)

[pocketRULER](#) (Rapid-Prototyping with FDM)**[Mar. 2014 – Jun. 2014]**

- Responsibilities include design, develop, present product, and organize group presentations
- Manage team schedule and gather data, design, and manufacture prototype
- Optimized prototype design through rigorous CAD and FEA iterations

[Project Panthra](#) (Autonomous Delivery Vehicle)**[Dec. 2012 – Jun. 2013]**

- Solder and wire key electronic components between motors, sensors, and control board
- Generate parts lists, assemble drawings, and integrate electrical and mechanical components.
- Test multiple sensors with PID for dynamic feedback control of distance in real time
- LabView is used to process and execute commands to autonomously control the robot

[Project Magneton](#) (Solid Freeform Fabrication (SFF) and Manufacturing)**[Sept. 2011 – Dec. 2011]**

- Design Solidworks model of Magneton then use SFF, waterjet cutter, EDM, and mill to create the rapid-prototype model. CNC is use in the production of components.
- Take designs from ideation to production and organize report for peer review

SKILLS

Programming/Software

- Proficient in: MATLAB, JavaScript, HTML, CSS, LABVIEW, UNITY
- Familiar with: C++, C#, Java
- CAD Software: Knowledgeable in static, non-linear, optimization, thermal, and dynamic FEA: ([Link1](#))([Link2](#))
 - Abaqus
 - Cmsol
 - Inventor
 - AutoCAD
 - Catia V5
 - Solidworks
- Unity Game Engine, Visio, jQuery, and Creative Suite (Dreamweaver, Photoshop, etc.)

Technical Skills

- Manufacturing: Mills, Lathe, CNC (MultiCAM 3000), Water-Jet Abrasive Cutter, Electrical Discharge Machining (EDM), Solid Freeform Fabrication (SFF type: 3D Printing, FDM, SLA), Bed-Mills, Table-Mills.
- Electronics: Sensors Testing and Installation, PID Control of Sensors and Actuators, Wire Soldering, Software-Hardware Integration, Integrated Circuit Designs, and Feedback Control.