

Melissa A. Trubey

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Los Angeles, CA

HIGHLIGHTS

- **8+ Years progressive industry experience in: Aerospace, Defense, Consumer Products, and Entertainment**
- **Bachelor of Science in Mechanical Engineering (BSME – San Diego State University)**
- **Full Project Lifecycle Experience** (*Initial Concept, Planning, Mechanical Detail Design, Analysis Iterations, Systems Design, Prototyping, Fabrication, Procurement, Assembly, Installation, Testing, and Delivery*)
- Highly Successful Cross-Discipline Team Communication, Collaboration, and Leadership
- Ability to translate between details and big picture goals of cost, schedule, and functionality
- **Creative and dedicated with a strong desire to learn, innovate, and drive projects through to success**

CORE COMPETENCIES AND PROFICIENCIES

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|---|-------------------|--|
| ▪ Mechanical Design and Engineering | ▪ Quick Learner | ▪ SolidWorks |
| ▪ Systems Engineering | ▪ Self-Starter | ▪ Pro/Engineer |
| ▪ Project and Product Management | ▪ Detail Oriented | ▪ Adobe: Acrobat, Illustrator |
| ▪ Hands-on Manufacturing and Build Experience | ▪ Problem Solver | ▪ MS Office: Excel, Word, PowerPoint, Project, Visio |
| | ▪ Results Driven | |

RELATED PROFESSIONAL EXPERIENCE

Mechanical Design Engineer II

Quartus Engineering, El Segundo, CA

9/2013 to 3/2015

Mechanical Design:

- Responsible Engineer for a patent-pending, cutting edge, rollercoaster sliding switch design element
 - Complex design with robust safety, braking, propulsion, and track interlocking mechanisms
 - Singularly achieved the highest quality and design efficiency portion of this rollercoaster project
 - Exceeded customer's aggressive weight budget allocation through design and analysis iteration
 - Familiarity with, and implementation of, governing design standards relating to Amusement Rides and Devices (including ASTM F2291 – 11 and EN 13814)
- Facilitated communication and coordination between teams, customers, and vendors ensuring the deliverables meet or exceed all goals; including design reports, meetings, and drawing packages
- Translated customer goals, project requirements, and governing standards into design details
- Accomplished in concept and system design, detail design, mechanism design, brainstorming and trade studies, 3D modeling and drafting, material selection, analysis, testing, and customer support for designs and projects in various industries
- Designed high strength compressive weld fixtures for titanium honeycomb 737 engine nacelle panels
- Designed multiple projects to facilitate spacecraft and rocket build/integration; improving build timeline, and increasing protection and safety for vehicle and staff

Mechanical Design Engineer

Ride Snowboards, a division of K2 Sports, Seattle, WA

3/2011 to 6/2012

Product Innovation, Design, and Development:

- Concept, ID, 3D modeling (including surfacing), analysis, material selection, prototyping, testing, problem solving, manufacturing, and post-production support for annual binding collection
- Conversion of graphic artist renderings into Product Specification Packages (Spec/Tech Packs)
- Extensive coordination with in-house marketing, customer service, graphic designers, test engineers, and brand representatives to achieve final product designs
- Patent research, competitor analysis, and market research for new designs and processes

Product Management and Production Support:

- Ensured product functionality, quality, cost, and on-time delivery for more than 200 SKU's
- Streamlined the databases, budgets, and Bill of Materials (BOM) for multi-generation products
- Budgeting, cost reduction, and price negotiations to maintain competitiveness and profit margins
- Frequent travel to and daily communication with factories, vendors, and overseas staff
- Negotiated and diligently facilitated earliest product sample delivery in Ride's history of manufacturing within China amid factory moves, shut downs, and labor strikes

Senior Mechanical Engineer

Raytheon Space and Airborne Systems, El Segundo, CA

6/2006 to 3/2011

Project Coordination and Team Lead:

- Responsible Engineering Authority (REA), and Lead Mechanical Engineer for various projects and subprojects (e.g. eLRAS, a rapid development laser rangefinder)
- Created Indentured Drawing Lists (IDLs) and BOM tracking tools facilitating team coordination
Provided project schedule support including resource and WBS task definition and tracking
- Interfaced and coordinated between engineering, supply chain, configuration management, operations, quality, safety, vendors, and subcontractors

Mechanical Design and Analysis:

- Proficient in mechanical design for optical sensors and laser systems including 'big-picture' full sensor architecture for space, airborne, and tactical operating conditions
- Investigated and resolved ARTEMIS payload thermal control issues, allowing accelerated testing and delivery, resulting in highest division award fee percentage ever received by Raytheon SAS
- Collaborated, conceptualized, and contributed to many low cost, rapid development and deployment projects, Internal Research and Development (IR&D) Projects, and proposal efforts
- CAD LEAD: Detail design through large assembly and mechanism modeling, analysis, and drawings; Geometric Dimensioning and Tolerancing (GD&T: ASME Y14.5M); Database Management

Assembly, Integration and Testing:

- Developed test layouts, designed test fixtures, assisted test execution for various projects, sensors, and sub-systems including ARTEMIS (TacSat-3) and VIIRS (NASA)
- Witnessed and verified formal hardware environmental testing to meet project requirements including Thermal, Vibration/Shock, and Vacuum/Pressure testing; implemented redesigns as necessary resulting from testing
- Designed vacuum and cryogenic feed-thru tools, allowing for real-time optical alignment in simulated space conditions, resulting in schedule acceleration for AIRSS/3GIRS
- Performed hands-on critical clean-room assembly and alignment of deliverable optical and laser systems for satellite, tactical, and demonstration applications including ARTEMIS, AIRSS and eLRAS

EDUCATION

B.S. Mechanical Engineering | San Diego State University, San Diego, CA | 2006

- Honors: Tau Beta Pi Engineering Honor Society, and Dean's List, College of Engineering
- Activities: SDSU Sailing Team, Society of Women Engineers, and SDSU Challenge-X Vehicle Team
- Senior Project: Responsible for the complete design of a unique, manually-shifted sequential planetary transmission with supporting stress and power flow analyses, for a parallel hybrid vehicle in the Challenge-X Competition sponsored by Argonne National Labs and General Motors

INTERESTS

Travel, Sailing, Snowboarding, Photography, SCUBA Diving, Hiking, Camping, and Environmental Stewardship

ADDITIONAL INFORMATION

For portfolio, recommendations, and additional information, please visit: <http://melissa.trubey.org>