

# CHRIS ROBERTS

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## PROFESSIONAL SUMMARY

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**U.S. Citizen**

**Active Secret Clearance**

**Mechanical Design Engineer Level 4; 20 years of experience in supporting NASA and Missile projects.**

Most recently demonstrated leadership in the engineering team for Lockheed Martin Missiles and Fire Control (MFC). I brought value to MFC by answering major engineering problems using creative design strategies, delivering value and expertise to the customer.

Proficient in creating engineering drawings for fabrication with a strong foundation in GD&T, ITAR, and EAR compliance.

## SPECIALTIES

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- CREO 9.0/Windchill 12.0
- Geometric Design & Tolerancing (GD&T)
- ASME Y14.5-2009 Dimensioning & Tolerancing
- NASA/Missile Programs
- Model Based Definition (MBD)
- Agile Methodology/Jira/Confluence/Scrum
- ASME Y14.1-2013 Engineering Drawing Practices

## WORK HISTORY

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04/2024 to 04/2025 **Senior Mechanical Design Engineer**

**Lockheed Martin, MFC** – Grand Prairie, TX

- Missile: ER-GMLRS (Extended Range-Guided Multiple Launch Rocket System)
- Lead Designer on the "Production Break" effort, an effort headed in Grand Prairie to stream line missile assembly to take place in Arkansas
- Personally Re-Designed the Bulkhead to accommodate three Warhead size configurations, which presented new challenges that I found solutions for
- Collaborated with the Wire Harnessing team to streamline cabling across the entire missile
- Conducted Engineering Tolerance Stack-Ups
- Designed Parts & Assy's Utilizing Model Based Definition (MBD)
- Utilized GD&T on engineering drawings

- Worked with Vendors and Suppliers to design and acquire unique fasteners for missile to replace traditional rivets which are experiencing supply shortages (Click Bond Rivetless nut plates)
- Mentored junior engineers, fostering skill development and promoting best practices in mechanical design.
- Utilized CREO to create detailed 3D models and technical drawings for complex missile parts & assemblies.
- Utilized Windchill for Product Lifecycle Management

02/2023 to 02/2024 **Senior Mechanical Design Engineer**

**Gulfstream Aerospace (contractor)** – Dallas, TX

- Interior completions design of new business jet G700
- Mechanical/Electrical design support
- 3D CAD Catia V5
- Product Lifecycle Management Enovia SmarTeam
- Microsoft Teams/Excell

10/2021 to 01/2023 **Senior Mechanical Design Engineer 4**

**Lockheed Martin, MFC (contractor)** – REMOTE

- LRASM Missile Project (Long Range Anti-Ship Missile)
- Utilizing Siemens NX to create Mechanical and Electrical Design Drawings for Missile Parts and Assemblies
- Creation of Electrical Cables and Harnesses
- Connectors, backshells, clamps, splices, and terminals
- Created Model Based Definition training content for use in company wide distribution
- Experience using the Agile methodology and received accolades from our Scrum Master for outstanding Sprint work.
- CREO/Windchill

07/2019 to 04/2020 **Senior Mechanical Design Engineer 4**

**Northrop Grumman (contractor)** – Northridge, CA

- AARGM-ER Missile Project (Advanced Anti-Radiation Guided Missile-Extended Range) for the F-35 fighter jet
- Utilized Siemens NX to Create & Release Engineering drawings of Mechanical, Structural and Electrical Components For The Missile Control System & Liquid Rocket Engine Propulsion System
- Collaborated w/ Structures, Configuration Mgmt, Contracts, Program Mgmt, Manufacturing, and International Trade Compliance
- Ensured ITAR & EAR Compliance on drawings
- Participated In Internal Design Review (IDR) & Critical Design Review (CDR) For U.S. Navy approval
- CREO/Windchill

12/2017 to 12/2018 **Senior Propulsion Engineer**

**Aerojet Rocketdyne (contractor)** – Canoga Park, CA

## **Liquid Rocket Engine Propulsion-AR1 Rocket Engine-Team Lead - Combustion Devices - Thrust Chamber Assembly (TCA) Group**

- Liquid Rocket Engine Design and Fabrication (LOX/RP-1)
- Responsible For Rocket Engine Integration w/ Liquid Rocket Engine Propulsion, Gimbal, Preburner, Main Injector, Thrust Chamber, & Nozzle.
- Creation & Release of Engineering Assy Drw's.
- Coordination w/ interdisciplinary subsystem specialists for mission success, Organized & Led Team Mtg's and Drawing Reviews.
- Participated In Preliminary & Critical Design Reviews For U.S.
- CREO/Windchill; GD&T
- Air Force Approval (PDR,CDR).
- Project: THAAD Missile Defense

01/2013 to 01/2016 **Student**

**Arizona Summit Law School** – Phoenix, AZ

Returned to College to earn a Juris Doctor (J.D.) degree.

01/2007 to 01/2012 **Mechanical Design Engineer**

**NASA JSC / Oceaneering** – Houston, TX

- Project: Space Vehicle Mockup Facility (SVMF) NASA; Neutral Buoyancy Lab (NBL)
- Mechanical Design & On-Going Maintenance Of The Full-Scale Astronaut Training Mock-Ups of The International Space Station (ISS) and Shuttle.
- Created & Released Engineering Drawings and Revisions.
- 3D Models Of Mechanical Parts & Assembly's.
- Catia v5

01/2005 to 01/2006 **Mechanical Design Engineer**

**Bigelow Aerospace** – Webster, TX

- Project: BA-330 Space Vehicle
- Deployable and Inflatable Spacecraft System Design.
- Environmental Control & Life Support Systems (ECLSS) On The Genesis I Space Module.
- Complete Lifecycle From Design To Fabrication.
- Coordinated w/ Machine Shop For Fabrication Of Parts.
- SolidWorks/Enovia.

## **EDUCATION**

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2005

**Bachelor of Architecture: Space Architecture (SICSA)**

**University of Houston** - Houston, TX

The **Sasakawa International Center for Space Architecture (SICSA)** is a unique interdisciplinary research, design and teaching academic center that supports the world's only Master of Science (MS) degree in Space Architecture. In 2015 The Texas Higher Education Coordinating Board approved changing the degree to a master of science with a STEM — science, technology, engineering and math — designation. We are academic leaders in the field of space architecture and are also active in the

planning and designing of facilities for extreme environments on Earth. These include ocean facilities, polar research stations and human disaster accommodations. Graduates will also conduct trade studies and learn about operational factors which contribute to the design, such as logistics, orbital mechanics, transportation cost trades, etc. Our collaborators have included NASA, The Boeing Company, Oceanering, and the Houston Airport System/Houston Spaceport.

Bachelor's Degree in Mechanical or Aerospace Engineering degree from an accredited university with a minimum of 2 years of experience.Experience in 3D CAD (PTC CREO Preferred).Experienced with Microsoft Office.US Citizen.Ability to obtain a Secret Clearance.

12/2005

**Minor: Construction Management**  
**University of Houston - Houston, TX**

## **AFFILIATIONS**

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AIAA - member  
American Institution of Aeronautics and Astronautics

## **SOFTWARE**

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- CREO 9.0
- PRO-ENGINEER
- PTC CREO WILDFIRE 5.0
- WINDCHILL 12.0
- TEAMCENTER
- SOLIDWORKS
- MICROSOFT WORD
- POWERPOINT
- EXCEL