

BETTY RODRIGUEZ

SENIOR ASSOCIATE, DAYTON AEROSPACE, INC.

PROFILE

Over 35 years of aerospace flight systems engineering experience on major aircraft systems development programs for the US Air Force (USAF) on multiple weapon system programs spanning development, production, and sustainment. Recognized subject matter expert (SME) in all aspects of air vehicle subsystems design, development, certification, and sustainment with specialized expertise in aircraft fuel systems and fire protection systems. Held engineering leadership positions and made major contributions to a diverse array of USAF programs including: F-16, F-15, B-1B and Joint Strike Fighter (JSF). Former Air Force Life Cycle Management Center Engineering Directorate (AFLCMC/EN) Flight Systems Engineering Division Chief. NH-IV, Department of the Air Force (DAF) (retired).

PRINCIPAL AREAS OF EXPERTISE

Air Vehicle Subsystems Engineering

Former technical advisor, Air Vehicle Subsystems Branch, ASC/ENFA. Participated in several independent review teams (IRTs) and source selections as the air vehicle subsystems and integrity programs subfactors evaluator. On numerous occasions, provided air vehicle subsystems technical support to the F-35 airworthiness certification process for the USAF variant aircraft. Technical lead for F-16 air vehicle subsystems, propulsion integration, structures, flight technology, crew systems, aircraft power, and wiring during engineering and manufacturing development (EMD) (Block 52+), production (Block 40 and 50) and sustainment (all Blocks).

Airworthiness Certification

As the AFLCMC Flight Systems Division chief managed multiple demands on the division's five branch chiefs, a technical director, five technical advisors and multiple technical experts from numerous airworthiness compliance reviews and reviewed the division airworthiness technical assessment documentation prior final submittal. Led the F-15 airworthiness process implementation in support of development modifications and flight test tape releases. Provided technical guidance to the development and execution of USAF alternative fuel certification in direct support of the Secretary of the Air Force (SecAF) directive to certify USAF aviation fleet to fly on domestically produced synthetic fuel.

Systems Engineering

Chief systems engineer for USAF F-15 development programs. Managed execution of ACAT I, II and III modernization programs, including the Electronic Passive Active Warning & Survivability System (EPAWSS) (ACAT I), two Airborne Electronic Scanned Array (AESA) radar programs (ACAT II), the Advanced Display Core Processor (ADCP) central mission computer replacement (ACAT II), and Operational Flight Program (OFP) Suites.



DAYTON AEROSPACE

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EDUCATION

MS, Mechanical Engineering
University of Dayton

BS, Systems Engineering, Mechanical Option

Wright State University
Air War College

KEY POSITIONS

Chief

Flight Systems Engineering
Division (AFLCMC/EZF)

Chief Systems Engineer

USAF F-15 Development
(AFLCMC/WWQE)

Chief Engineer

Alternative Fuel Certification
Division (AFCD) (AFLCMC/WNN,
formerly ASC/WNN)

Technical Advisor

Air Vehicle Subsystems Branch
(ASC/ENFA)

Chief Flight Systems Engineer

F-16 Systems Group, ASC/YPVF

CERTIFICATIONS

Acquisition Professional Development Program (APDP)

Systems Planning, Research,
Development & Engineering
(SPRDE) - Level III

Systems Engineering - Level III
Test & Evaluation (T&E) - Level I

WORK HISTORY

Senior Associate | Dayton Aerospace, Inc.

2021-present, Dayton, OH

Provide systems engineering technical consulting to government and industry clients in all phases of the acquisition life cycle. Specific areas of expertise include air vehicle subsystems engineering and military airworthiness certification support and documentation.

Chief | Flight Systems Engineering Division, Air Force Life Cycle Management Center (AFLCMC/EZF)

2015-2020, WPAFB, OH

Managed workload of 50+ flight systems engineers across the EZF Division to ensure proper execution of the USAF mission. Demonstrated exceptional organizational skills, managing multiple demands on the division's five branch chiefs, a technical director, five technical advisors and multiple technical experts from numerous airworthiness compliance reviews. Supported various AFLCMC programs and taskings from the Engineering Directorate (AFLCMC/EN-EZ) Director. During tenure, Flight Systems Division was recognized as the go-to division for independent assessments in the areas of aerial refueling and ATTLA certifications; engines; airframe structural loads, dynamics, and durability; aircraft escape and life support systems; pilot-vehicle interface; human factors; aircraft fuel; hydraulic, electrical, pneumatic, mechanical and environmental control systems; and aircraft aerodynamics, performance analysis, stability and flight control systems. Demonstrated outstanding vision regarding the application and promulgation of analytical tools. Advocated for digital modeling effort, supporting the Negatively Pressurized Conex unit to fit inside of a C-17 aircraft, which enabled the safe transport of COVID-19 patients and medical professionals to medical facilities around the globe. While leading division, flight systems engineers worked three major lines of efforts including COVID-19 rapid aircraft disinfection, rapid development and deployment of transport isolation units, and vaccine distribution cargo transport procedures under Operation Warp Speed. Worked closely with program office leadership and directors of engineering (DOEs) to quickly find candidates for vacant positions. Evaluated hundreds of resumes and selected engineering candidates to fill multiple NH-III and NH-IV supervisory engineer vacancies across AFLCMC through expedited hiring authority and competitive selection processes. Substantially impacted USAF future manning objectives through record level hiring initiatives.

Chief Systems Engineer | USAF F-15 Development, AFLCMC/WWQE

2012-2016, WPAFB, OH

Chief systems engineer for the USAF F-15 development programs. Managed the execution of ACAT I, II and III modernization programs. Main programs included the Electronic Passive Active Warning & Survivability System (EPAWSS) (ACAT I), two Airborne Electronic Scanned Array (AESA) radar programs (ACAT II), the Advanced Display Core Processor (ADCP) central mission computer replacement (ACAT II), and Operational Flight Program (OFF) Suites. Led the implementation of the F-15 airworthiness process in support of development modifications and flight test tape releases. Developed the airworthiness plan for two reportable mods, ADCP II and Talon HATE and ensured concurrence by EN-EZ director and F-15 program manager. Developed numerous process flows to ensure that systems engineering was upheld at all levels within the F-15 program office and established daily communication channels to work with Robins Air Force Base F-15 chief engineer. Served as mentor to the junior workforce and trusted advisor to senior-level F-15 leadership.

Chief Engineer | Alternative Fuel Certification Division (AFCD) (ASC/WN)

2007-2012, WPAFB, OH

Provided technical guidance to the development and execution of USAF alternative fuel certification in direct support of the Secretary of the Air Force (SecAF) directive to certify USAF aviation fleet to fly on domestically produced synthetic fuel. Briefed SecAF on numerous occasions on the status of the USAF fleet certification. Provided periodic technical updates to SAF/AQ, SAF/IE. Executed and recommended updates to the Alternative Fuels Certification (AFC) Handbook MIL-HDBK-510 process. Acted as the USAF representative to the Alternative Fuels Commercial initiative and authored the first tri-service alternative fuels certification plan. Recipient of the 2008 ASC/EN Tech Leadership award and General Carlson's Commander's award. Selected from aviation professionals from around the world to have technical career highlighted in Flight International Magazine (Oct 2011). Selected as one of Dayton's Ten Top Women of the Year in 2010.

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Technical Advisor | Air Vehicle Subsystems Branch (ASC/ENFA)**2006-2007, WPAFB, OH**

Lead author in the development of MIL-HDBK-510 which describes the process for certification of alternative fuels for the USAF. Effort was in direct support of the SecAF directive. Developed process for certifying new fuels by consolidating common requirements, providing guidance to systems managers for necessary verification for certification. Awarded Honorary Defense Standardization Program Achievement Award and Exemplary Civilian Service Award. Provided air vehicle subsystems technical support to the F-35 airworthiness certification process for the USAF variant aircraft. Participated in the KC-X source selection as the air vehicle subsystems and integrity programs subfactors evaluator.

Chief Flight Systems Engineer | F-16 Systems Group (ASC/YPVF)**2003-2006, WPAFB, OH**

Technical lead for the F-16 air vehicle subsystems, propulsion integration, structures, flight technology, crew systems, aircraft power and wiring, during engineering and manufacturing development (EMD) (Block 52+), production (Block 40 and 50) and sustainment (all Blocks). Ensured the airworthiness certification process for all blocks of the F-16A/B/C/D aircraft. Directed the F-16 SEEK EAGLE stores certification effort encompassing all flight systems disciplines. Ensured the \$20M+ per year engine program met cost, schedule and technical constraints. Directed development and execution plans of the Congressionally mandated \$16M, 600-gallon external fuel tank on F-16 Block 50/52. Led the investigation of the F-16 flaperon buzz occurrences during the Block 52+ flight test, a potential safety of flight issue. Organized a team of experts from the Air Force Research Lab (AFRL), Lockheed Martin Aero and the Engineering Directorate to review the flight test data and provided recommendations to the F-16 Tech Director. Provided leadership and technical direction for the F-16 SEEK EAGLE flight clearances and certifications. In a period of 10 months, 61 USAF flight clearances were issued directly to the field and 9 Quick reaction certifications flight clearances were issued to the frontline units. Led the SEEK EAGLE integration of Air Combat Command's (ACC) accelerated fielding of GBU-38 (JDAM 500 Lb) on Blocks 25-52 in support of Operation IRAQI FREEDOM (OIF). Provided accelerated fielding of SNIPER Advanced Targeting (AT) pods on F-16 Block 40 aircraft in support of OIF. Received a Notable Achievement Award in 2004.

Subsystems Technical Lead | F-16 Systems Group (ASC/YPVF)**2003-2006, WPAFB, OH**

Advised, directed, and evaluated the work of subordinates in the areas of air vehicle subsystems and provided technical direction to engineers in the areas of landing gear, flight controls, electrical power, starting systems, hydraulics and environmental system sustainment support with emphasis on production issues. Provided technical status briefings to senior technical and management personnel and answered program executive officer (PEO) for fighters and bombers questions on F-16 inerting agent, landing gear and starting systems. Provided extensive interface with OC-ALC and OO-ALC communities to maintain the F-16 legacy systems and introduce new technologies.

Prior to 2003

- Technical Expert, Fuel Systems & Fire Protection, ASC/ENFA, WPAFB, OH
- Fuel Systems & Fire Protection Engineer, ASC/ENFA, WPAFB, OH
- Lead Flight Systems Engineer, B-1B, ASC/SDBF, WPAFB, OH
- Lead Fuel & Hazards Engineer, B-1B, ASC/B1EFP, WPAFB, OH
- Fuel Containment Group Leader, Fuel and Hazard Branch, WPAFB, OH

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