

JORGE GONZALEZ

SENIOR ASSOCIATE, DAYTON AEROSPACE, INC.

PROFILE

Over 35 years of service as a civilian engineer in the US Air Force (USAF). Recognized subject matter expert in all aspects of aircraft design, development, certification and sustainment with specialized expertise in USAF airworthiness and aircraft structures. Experience on most major weapon systems in the current USAF inventory; held critical engineering leadership positions and made major contributions to a diverse array of programs including: F-16 multi-role fighter and its variants, B-1B, F-15, F-100 and F-110 engines, B-2, C-17, Predator A and B, C-130, C-5 and F-22 Raptor. Provided technical and management support to Joint Strike Fighter (JSF), Global Hawk, Airborne Laser and several classified programs. Worked on every phase of the acquisition cycle—from YF-22 and YF-23 concept exploration and demonstration validation to B-1B, C-17, F-22 and F-16 engineering and manufacturing development (EMD) to C-5, C-130, C-17, B-1B, F-15, and F-16 production and sustainment. Senior Executive Service (SES), Department of the Air Force (DAF) (Retired).

PRINCIPAL AREAS OF EXPERTISE

USAF Airworthiness

As the USAF's Technical Airworthiness Authority (TAA) from 2013 to 2018, responsible for aircraft flight authorizations for the USAF's 5,400+ aircraft fleet, certifying all aircraft as safe-to-fly. Provided independent airworthiness determinations for all aircraft owned, operated, leased or modified by the USAF. Approved service life extensions, saving over \$250B in aircraft replacement costs.

Systems Engineering

Government lead for the Predator/Hellfire demonstration team, weaponizing an unmanned aerial vehicle (UAV) for the first time in history. Evaluated all technical areas including structures, stability and control, aerodynamics, vehicle performance, weapons integration, flutter, and system integration and performed an independent assessment of the UAV prime contractor, General Atomics Aeronautical Systems. The program was a resounding success and changed the future of the USAF.

Aircraft Structural Integrity

Served as the team lead for an independent review team (IRT) on a highly publicized F-15 mishap due to a structural failure. Reviewed first order accounts of the canopy sill longeron failure, a primary structural member of the forward fuselage and the root cause of the catastrophic F-15 structural failure. IRT concluded the mishap resulted from a fatigue crack in the upper right longeron that grew over time to a critical length at a previously unknown "hot spot" area caused by the culmination of high local bending stresses. Failure mechanism was confirmed through physical evidence and analysis from the mishap aircraft. The F-15 fleet was inspected in newly defined areas—resulting in the prevention of additional catastrophic aircraft incidents.

Organizational/Personnel Management & Leadership

As the AFLCMC director of engineering, responsible for providing qualified engineering and technical management resources (organize, train, and equip responsibilities) to all AFLCMC program executive officer (PEO) programs. Hand-picked by AFMC leadership to co-lead the reformation of the scientist and engineer workforce from twelve to five centers in an unprecedented reorganization focused on greater efficiency with the goal of eliminating positions to divert civilian pay funding to more pressing needs. As a result, 194 engineering positions were harvested for an annual cost savings of over \$18M.



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4141 Colonel Glenn Hwy.
Suite 252
Dayton, Ohio 45431

P: (937) 426.4300

EDUCATION

MBA, Sloan Fellows Program
Massachusetts Institute of
Technology (MIT)

MS, Aerospace Engineering
University of Dayton

BS, Civil Engineering
University of Puerto Rico

KEY POSITIONS

Director, Engineering and USAF TAA
AFLCMC/EN-EZ

**Director, Engineering and Technical
Management**
AFSC/EN

**Technical Director/Director of
Engineering**
402nd Maintenance Wing, WRALC

Technical Director
HQ AFMC/EN

**Technical Director, Engineering and
Technical Management Directorate**
Agile Combat Support Systems
(ACSS)

**Chief Engineer and Air Vehicle IPT Co-
Lead**
C-17 Program

Airframe IPT Co-Lead
F-22 Program

CERTIFICATIONS

**Acquisition Professional
Development Program (APDP)**

Systems Planning, Research &
Engineering – Level III

Program Management – Level I

**Association of Airworthiness
Professionals (AAP)**

Charter Member

WORK HISTORY

Senior Associate | Dayton Aerospace, Inc.

2018-present, Dayton, OH

Provide senior-level technical consulting to government and industry clients in all phases of the acquisition life cycle. Specialties include military airworthiness certification, aircraft structural integrity and systems engineering. Supported Sierra Nevada Corporation and Leonardo DRS on airworthiness certification and documentation.

Director, Engineering & Technical Management and USAF TAA | AFLCMC/EN-EZ

2013-2018, WPAFB, OH

Served as the principal technical advisor to the Air Force Life Cycle Management Center (AFLCMC) Commander with primary responsibility for all matters concerning the USAF Scientific Advisory Board and product assurance. Dual-hatted as the director of engineering—the top AFLCMC senior management engineering position—and the USAF Technical Airworthiness Authority (TAA). Directed over 3,200 scientists and engineers across the center located in over 40 geographic locations. Provided technical and management expertise and continuity and ensured the timely transfer of corporate knowledge, experience and technical resources to support all AFLCMC program executive officer (PEO) programs. Championed the Department of Defense (DOD) initiative to strengthen the engineering workforce; re-energized the use of analytical tools and centralized purchases to improve tool access. Acted as catalyst for competency management effort, a workforce characterization tool to ensure the right individual with the right technical skills is placed on the most critical program at the right time. Final authority on engineering matters, stating AFLCMC signature positions and committing resources. Responsible for USAF aircraft fleet safety and airworthiness and provided independent airworthiness determinations for all aircraft owned, operated, leased or modified by the USAF (Ref AFPD 62-6).

Planned for current and future development of all AFLCMC weapon systems, subsystems, and equipment. Planning considered technical integration across all AFLCMC portfolios, which include flight systems, avionics, armament, manufacturing, munitions, sustainment, C3I network systems, support systems, support equipment, and overall systems engineering support in areas such as technology transition and airworthiness certification. Guided senior leaders', senior colonels' and high-ranking civilians' activities in fulfillment of the AFLCMC mission which includes a vast array of complex systems engineering management efforts across a diverse set of PEO portfolios—to include technical order management. Responsible for all activities of the AFLCMC Engineering Directorate; established overall policies and assigned and managed of resources. Worked with PEOs, directors of engineering, and division chiefs to review programs and provide guidance to ensure adequate resources. Approved service life extensions, saving over \$250B in replacement costs and spearheaded 12 independent technical reviews of multi-billion-dollar defense programs—proactively provided recommendations with a projected cost avoidance of over \$300M over the FYDP. Developed innovative technical solutions to comply with aircraft software and cyber security requirements—saved over \$100M on two aircraft electronic systems and identified additional savings on 50+ systems. Incorporated cost-effective stealth technology to secure air dominance—projected \$6B F-35 life cycle cost savings and \$300K cost savings per year for B-2 fleet maintenance.

Director, Engineering & Technical Management | AFSC/EN

2010-2013, WRALC, GA

Directed 1,700 scientists and engineers executing over \$76B annually to maintain USAF aircraft, commodities, and software. Performed independent analysis supporting C-130 aircraft delivery after periodic maintenance, reducing schedule by 29.4% and improving fleet availability by 3%—yielding 5,475 more flight hours. Co-led engineering team for the unprecedented Air Force Materiel Command (AFMC) reorganization which consolidated 12 Centers into 5—saving 194 engineering positions and \$18M annually. Masterminded and executed small business contract consolidation that resulted in over \$20M in first-year savings and a projected \$5M annual savings compared to legacy contracts. Led effort to reduce carcinogenic cadmium and chromium use in USAF facilities. Developed and secured funding for a first-ever weekend MBA program in partnership with Mercer University; curricula tailored to one-year completion—over 100 graduates since its inception.

Technical Director/Director of Engineering | 402nd Maintenance Wing

2009-2010, WRALC, GA

Responsible for technical content and technical career field oversight for the largest wing at Robins AFB. Wing is comprised of over 8,600 personnel including over 1,000 scientists and engineers. Technical advisor to the commander on multiple critical areas such as F-15, C-17, and F-22 software maintenance and upgrades; C-130, C-5, F-15 and C-17 programmed depot maintenance (PDM); production support; commodities maintenance; and electronics and avionics systems maintenance. Managed wing-level activities to include information technology (IT), technology insertion/transition, LEAN implementation,

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standard work, electronic technical orders, high velocity maintenance (HVM), item unique identification (IUID). Also, responsible for engineering workforce career planning.

Technical Director | AFMC/EN

2005-2009, WPAFB, OH

Assured operational safety, suitability, mission effectiveness, and supportability of AFMC-managed systems throughout their life cycle. Led command-level technical teams and was entrusted to resolve issues with USAF-wide impact. Spearheaded F-15 independent review team (IRT) leading to root cause validation of a Class A mishap and endorsed corrective actions to address fleet structural concerns over the next 25 years. Interfaced with Air Combat Command (ACC) Commander and senior scientist in support of ongoing investigations. Briefed the Under-Secretary of Defense (OUSD) and the Office of the Secretary of Defense (OSD)-led Joint Assessment Team (JAT). Findings were fully embraced by the OSD JAT and led to major F-15 funding increases to address aging aircraft issues and fleet certification for extended service life operations. Led the quick response multi-platform, radar technology insertion program (MP-RTIP) IRT tasked to assess technical scope, cost and schedule to complete and identify potential impacts to the Global Hawk program. Personally, briefed findings to the overarching integrated product team (OIPT) which included a detailed MP-RTIP work-to-complete assessment and five discrete cost and schedule estimates based on recent government and contractor past performance. Led the charge for the stand-up of an independent airworthiness process/authority. Provided continued support of major command-wide efforts in response to Secretary of the Air Force (SECAF) initiative to decrease dependency on foreign sources of aviation fuel. Provided key contributions to the USAF-level Aircraft Structural Integrity Program (ASIP) review culminating in a comprehensive briefing to AFMC/CC, the SECAF and Chief highlighting overall USAF fleet health. Recognized F-15 IRT and MP-RTIP team by completing award packages for the government members and letters of commendation for contractor personnel.

Director of Engineering | Agile Combat Support Systems (ACSS) Wing

2004-2005, WPAFB, OH

Managed 10 direct reports and was the functional supervisor of more than 250 employees. Entrusted with technical execution oversight for a team of 770+ and \$2.2B annual budget. Responsible for wing engineering resources, processes and procedures for two direct-report groups and three direct report squadrons under the ACSS Wing. Established ACSS Wing policy and processes and documented on wing web site for easy access. Led independent assessment of next generation Lighting and Sniper targeting pods. Enforced common, fully documented processes across diverse wing.

Chief Engineer and Air Vehicle IPT Co-Lead | C-17 Program

2002-2004, WPAFB, OH

Chief engineer and technical co-lead of the C-17 Air Vehicle Integrated Product Team (IPT). Led a diverse team of technical and managerial professionals responsible for an annual budget of over \$2.5B. Responsible for the design, development, technology transition, modernization, test, production, and sustainment of the C-17 air vehicle and weapon system. Directed multiple modernization and improvement projects with an average annual value of \$230M including new color weather radar system, improved communication and navigation system, new on-board gas inerting system, enhanced aircraft countermeasures, extended range center wing fuel tank and numerous other critical improvements. Responsible for technical content of over \$90M annual budget associated with aircraft modifications. Personally, responsible for the certification and flight clearance of all production C-17 aircraft. Led acceptance process for all C-17 aircraft delivered during tenure, averaging 15 aircraft per year. Interfaced frequently with Air Mobility Command (AMC) leadership and briefed AMC/CC on formation flying system technical issues presented plan to lift restrictions.

Prior to 2002

- Chief, Structures Branch, ASC/ENFS, WPAFB, OH
- Chief, Airframe IPT and Chief, Structures Engineer, F-22, ASC/YFAB, WPAFB, OH
- Aerospace Engineer, Engineering and Manufacturing Panel, ASC/JET, F-22 JET, WPAFB, OH
- Chief, Structures Engineer and Lead Durability and Damage Tolerance Engineer, F-22, WPAFB, OH
- System Technology Integration Engineer, ATF, ASC, WPAFB, OH
- Durability and Damage Tolerance Engineer, ASD, B-1B, WPAFB, OH
- Durability and Damage Tolerance Engineer, ASD, F-16, WPAFB, OH
- Durability and Damage Tolerance Engineer, ASD, Fracture and Durability Branch, WPAFB, OH

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PUBLICATIONS & PRESENTATIONS

Panel Member and Briefer. Current and Future Changes to ASIP Requirements. Presented at the Aircraft Structural Integrity Program Conference, Memphis, Tennessee, March 2005.

Principal Author. MP-69-P-05, Application of Structural Titanium Castings on The USAF F-22 Raptor, ASC/ENFS. Presented at the NATO Research & Technology Organization, Norway, 9 May 2001.

Co-Author. "A Guide to Mitigate Risks Associated with Titanium Castings in Durability/Fracture Critical Applications," December 2000.

Co-Author. "Lean Methods above the Manufacturing Floor in an Aerospace Military Program," Master of Business Administration Thesis, Massachusetts Institute of Technology, June 1999.

Co-Author. F-22 Materials Application, F-22 System Program Office (SPO), Presented at the SAMPE and ASTM International Conference.

Co-Author. Composite Materials Application in the F-22, F-22 SPO, Presented at the SAMPE and ASTM International Conference.

Co-Author. Resin Transfer Molding (RTM) Applications for the F-22, F-22 SPO, Presented at the SAMPE and ASTM International Conference.

Author. "ATF Bird Strike Requirements and Analytical Methodology," ATF SPO, December 1989.

Author. "B-1B Bird Strike Analysis, B-1B System Program Office," January 1988.

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