

## SUMMARY

*Master of Science degree in Aerospace Engineering, demonstrating 20 years in both management & field experience. Managed in-house and contractual programs for the Aeromechanics Branch of the Air Force Weapon Laboratory; directed one of the organization's most critical technical programs. Exemplary both in the technical arena and as a leader of team-centered units.*

## AEROSPACE ENGINEERING EXPERIENCE

**Engineering//Project Management**

United States Air Force 1963-1983

*Staff Engineer* - USAF Contract Management Division

- Coordinated organizational engineering efforts at General Dynamics, Boeing, Fairchild & Thiokol
- Ensured compliance of contractor procedures for Program Engineering & Technical Management
- Created management information system utilized by senior level Air Force management

*Chief - Aeromechanics Branch* - USAF Weapons (Phillips) Laboratory

- Directed interdisciplinary team of 13 engineers - aerodynamics, structures, laser physics - for the USAF Airborne Laser Laboratory(ALL) Program
- Designed & evaluated advanced airborne laser aircraft fairings: estimated & measured drag, calculated potential flow field, evaluated boundary layer & flow field turbulence
- Performed subsonic & transonic wind tunnel tests at NASA Ames: wrote test plan, coordinated model fabrication & instrumentation, directed test & wrote test report
- Directed B-52 wake tower test: measured velocities with hot wire anemometer, extracted & measured CO2 levels in wake, computed and verified wake structure for induced drag & thermal blooming and other aberrations of airborne laser beam
- Maintained AFWL compilation of 15 years of aerodynamic data on airborne laser aircraft

*Project Engineer* - USAF Aeronautical Systems Division, USAF Flight Dynamics Laboratory and White Sands Missile Range(WSMR)

- In-House Drag Studies: Performed drag build-up of F-111 from subsonic CALSPAN data, tested minimized induced drag model in AFIT 5' Wind Tunnel, developed low speed flow visualization facility
- Engineering test & analysis of future STOL & V/STOL aircraft designs: directed wind tunnel lift & drag tests, analyzed data, wrote reports, evaluated noise footprints
- Hypersonic wind tunnel testing & basic research on re-entry vehicles: formulated theoretical model of rolling moment, co-wrote report
- Subsonic & supersonic wind tunnel test: drag analysis of lifting re-entry vehicles, performed subsonic wind tunnel test to measure lift & drag
- Flight test engineer, test planner & data analyst for drone & air-to-air systems: directed aircraft modification & instrumentation, wrote range documentation, scheduled tests, analyzed reports, reported findings

**Additional Experience**

- Developed and managed construction of a nationally recognized care facility for people with AIDS; served as Executive Director of sponsoring non-profit corporation
- Coordinated technical publications & conferences for SPIE: e.g. Laser Holography for transonic wind tunnel flow visualization, assisted organization of First SPIE Imaging Conference
- Evaluated length & noise implications for proposed Bellingham International Airport Runway Extension, served on team which briefed concerned citizens
- Chaired Airport Advisory Committee for the Port of Bellingham: evaluated Airport master Plan Update, chaired preliminary plans for Bellingham Air Show
- Owned and managed successful business, grossing \$120,000 a year

**Education**

Bachelor of Science, Aeronautical Engineering Major, US Air Force Academy  
 Master of Science, Aeronautical Engineering, Stanford University

**Computer Skills:** Fortran, Pascal, Windows, Window Works, Word Perfect, Some Assembly

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