

# Francesco Fusco

The Boeing Company – Boeing Defense, Space & Security – Exploration Launch Systems Houston  
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## PROFESSIONAL SUMMARY:

A highly motivated aerospace engineer with extensive technical knowledge and proven experience in coordinating team members across multiple international organizations. Brings a significant work experience both in international space and aeronautics programs resulted in the development of considerable communications skills and a strong background of a variety of hardware and software systems. Dual Citizenship (US and Italian), multilingual and willing to travel. Selected strengths and skills include:

Planning and Organizing	Test and flight support	Rocket Propulsion
Anomaly Analysis/Resolution	Data reduction	Hypergolic propellant systems
Multi-Tasking	Develop operational procedures	Hot-fire test
Self-Directed	Engineering Drawings/Specs	Fluid dynamic analysis
Mentoring	Programming	Integrated system design

## PROFESSIONAL EXPERIENCE:

### The Boeing Company, Houston, Texas

2003–Present

- Supported CST-100 Starliner as Service Module Hot Fire Test Conductor. This role included: designing and operating Graphical User Interfaces to control the engines without using flight computers, define operations and write test procedures, data reduction and data analysis.
- Technical lead supporting the development of an interactive analysis tool for the USAF B-1 fuel systems.
- Provided Design Engineering support for Space Shuttle Data Processing System (DPS), Propulsion, Orbital Maneuvering and Reaction Control Systems (OMS/RCS).
- Reviewed and approved Deviation Sheets, Engineering Design Change Proposal, Discrepancy Record as responsible RCS rocket propulsion engineer and member of the Prime Material Review Board.
- Defined and finalized a major modification to the Vernier RCS thruster hot-fire acceptance test procedure.
- Led various failure analysis investigations.
- Wrote/Reviewed numerous Corrective Action Records (CAR), Memorandum of Agreement (MOA) and Hazard Reports.
- Provided real-time flight support for the Space Shuttle Orbiter in the Johnson Space Center Mission control complex.
- Reduced flight data to evaluate past performance and predict future performance of propulsion system components.
- Designed and developed several analysis tools for the KC-135 Tanker aircraft fuel engine feed and hydraulic systems.
- Provided expertise and data analysis skills to the Hydraulics Analysis team for the KC-46 Tanker aircraft.
- Provided Design Engineering support for Space Launch System (SLS) Thrust Vector Control (TVC) system.
- Designed and implemented TVC hydraulic system model for SLS Vehicle Management (VM).
- Played a key role into the Circulation Pump testing activities performed at Marshall Space Flight Center.
- Mentored and motivated other peers as their Technical Lead Engineer (TLE)
- Developed and integrated software tools for 777-X

**FISE - Foundation for International Space Education**

2006–Present

- Executive Director
- Country Manager.
- Director of Public Affairs.

**Alenia Aeronautica - Torino, Italy**

2000–2003

- Work performed under the EFA (European Fighter Aircraft) Program, which required a NATO SECRET clearance.
- Collaborated with international partners of EFA, including organizations in England, Germany, and Spain as well as with the Italian Air Force.
- Focal Point for Flight Test Avionics activities including the resolution of problems found on the aircraft both real-time and during post-flight analysis, as well as involvement in the coordination of efforts among flight activities in partner countries.
- Developed database of test activities including previous test data and future test requirements.
- Performed data analysis, telemetry, Control Room activities, and test planning related to several Avionics activities (GPWS: Ground Proximity Warning System, FLIR: Forward Looking Infrared Equipment, GPS: Global Position System, LINS: Laser Inertial Navigation System, etc.) and several Propulsion Systems activities (thrust-in-flight calculations, surge, engine handling, fan flutter, etc.).
- Wrote computer codes to facilitate and automate data analysis processes.

**NASA - Lyndon B. Johnson Space Center, Houston, TX**

1999

- Studied the evaporation of propellants in a vacuum as it relates to propulsion system leakage, refueling of the Space Station, and ignition.
- Designed several concepts for experiments determining the evaporation rate of liquids in a vacuum; Test performed at Energy Systems Test Area (NASA-JSC) and at NASA-White Sands Test Facility.
- Developed a theoretical model of evaporation of liquid in a vacuum based on previous models.

**EDUCATION:****University: Politecnico di Torino - Torino, Italy**

- *Professional Engineer accreditation*
- *Laurea in Ingegneria Aerospaziale (Title: Doctor in Aerospace Engineering)*

**Rice University – Houston, TX:**

- *Data Acquisition Systems*
- *Engineer Approach to Mathematical Programming*
- *Engineer Approach to Optimal Control*

**University of South California – Los Angeles, CA:**

- *Liquid Rocket Engines for Spacecraft Pressure-Fed Propulsion Systems*
- *Safety of Space Systems and Space Missions*