# Why Choose STI?

### Six Decades of Aerospace Excellence

- Recognized Industry Experts in Aircraft Handling Qualities and Pilot-Induced Oscillations
- Conducted System Design Audits for C-2A, CH-53E, F-4, F-14, F/A-18, T-45, V-22
- Developed Advanced Aeroservoelastic Analysis Methods and Modal Suppression Techniques
- Design and Analysis of Fly-by-Wire Systems for classical and exotic vehicles designs

### Classical and Cutting-Edge Design & Analysis

- Use of Time and Frequency Domain Techniques
- Employ Modern, Classical, Optimal, Robust, and Adaptive Control Methods
- Wavelet-based Time-varying System Analysis
- GN&C for Autonomous Systems
- Machine Learning
- Output-only Modal Identification



## **Value Proposition**

- Solve complex dynamic problems through a thorough understanding of the fundamental underlying physics and mathematics
- Begin with the simplest model that captures the dominant system behavior and then build up complexity as needed to capture higher order effects
- Bring comprehension of the human operator and the human-machine interface

# **Contact Us**



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# WHERE COMPLEX DYNAMIC SYSTEMS AND HUMAN OPERATORS INTERSECT



# **DESIGNED TO ENGINEER**

"If it moves, we can engineer a solution"



Systems Technology, Inc. 13766 Hawthorne Blvd. Hawthorne CA 90250

www.systemstech.com



### **Company History**

Systems Technology, Inc. (STI) is a small employeeowned research, consulting, and product development firm located in Hawthorne, California.

Founded in 1957, STI has been devoted to the study of vehicle dynamics, control, and related human factors for nearly sixty years. STI focuses on aircraft dynamics, aerodynamics, flight control system design and analysis, handling qualities, and manual control theory.

STI has addressed the Navy shipboard approach and landing problem for both fixed- and rotarywing aircraft over its 60-year history through advanced flight control designs, handling qualities assessments, ship motion projection, and IFLOLS stabilization.



### **Mission/Vision Statement**

We develop engineering solutions for complex moving machines and the humans that control them, from aircraft to automobiles.

Our engineering consulting services and simulation products bridge the gap between advanced engineering and human factors.

### **Core Competencies**

- Analysis of Dynamic Systems
- Flight Control System Design and Analysis
- Autonomous Vehicle GNC
- Flight Test and Simulation
- Human-Machine Interface
- Advanced Displays
- Machine Learning
- System Identification

### **Current Effort for the Navy**

Improving shipboard landings in high sea state conditions for varying class of autonomous vehicles remains a constant challenge for the US Navy.

Our modular solution provides a completely general framework with applicability to rotorcraft and fixed wing unmanned aircraft system (UAS) operations.



The system involves two primary components: 1) a predictive deck motion estimation (DME) algorithm; and

2) a swappable guidance and control algorithm.

### **Market/Customers & Collaborators**

- Government Customers
  - Navy: NAVAIR, NAVSEA, ONR, NAWCTSD
  - Air Force: AFRL, AFTC, AFOSR
  - Army: ARL, AMRDEC, TARDEC
  - ➢ NASA: AFRC, ARC, GRC, JSC, LaRC
  - **DOT:** FAA, FHWA, NHTSA
  - DHHS: CDC, NIA, NIH, NIOSH
  - > DOI: USFS
- Industry Collaborators
  - > Bell Helicopter
  - The Boeing Company
  - General Atomics Aeronautical Systems, Inc.
  - Lockheed Martin
  - Moog, Inc.
  - Northrop Grumman
  - Sikorsky
  - Textron Cessna
- International Collaborators
  - > Embraer

#### **Contract Vehicles**

- SBIR/STTR
- BAA
- IDIQ
- NRA
- Commercial Consulting

