# Aerospace Control and Guidance Systems Committee
# Short Course
# *Aircraft System Identification in the Frequency Domain – Methods and Practical Applications*

**Instructor: Dr. Gene Morelli, NASA Langley**

**Date:** 26 March 2019

**Time:** 8:00 AM - 5:00 PM

**Location:** Eldorado Hotel & Spa
309 W.San Franciso St.
Santa Fe, NM 87501

**Cost*:** $350.00

- Short course fee includes CD, class notes, continental breakfast and lunch
- *Instructor's textbook : "***Aircraft System Identification Theory and Practice***" **not required**, but may be purchased at a discounted rate of $88 when you register for the class

**How to Register:** www.acgsc.org for registration links
(If you have trouble registering or for any questions please email secretary@acgsc.org)

**Registration Deadline:** March 5, 2019

## Course Synopsis:

This course teaches an overview of theory and practice of using frequency-domain methods to build mathematical models for aircraft based on flight data. The results are useful for flight simulation development, aircraft stability and control flight testing, comparisons with results from computational fluid dynamics and wind tunnel tests, flight envelope expansion, control system design and refinement, flying qualities assessment, and more. The course includes relevant theory and background for various methods, but focuses mainly on practical applications and solutions. Course Objective: Provide an understanding and working knowledge of practical approaches for aircraft modeling in the frequency domain, along with a discussion and demonstration of the situations where these methods work well, and when alternative methods are required.

## Instructor Background:

**EUGENE A. MORELLI** is a senior research engineer at NASA Langley Research Center in Hampton, Virginia. He earned a Bachelor's degree in Mechanical Engineering from Bucknell University, a Master's degree in Aerospace Engineering from Princeton University, and a Doctoral degree in Aerospace Engineering from George Washington University. His research interests include aircraft system identification, flight dynamics and simulation, aircraft accident investigation, experiment design, and time series analysis. He is an internationally recognized expert in aircraft system identification, and is the author or co-author of more than 110 technical publications, including the textbook entitled Aircraft System Identification – Theory and Practice. Dr. Morelli is also the author of the software package called SIDPAC, which is used at more than 100 organizations worldwide to solve aircraft system identification problems.