

Aerospace Engineering Distinguished Seminar Series

Combustion Dynamics in Propulsion Systems

Dr. Vigor Yang

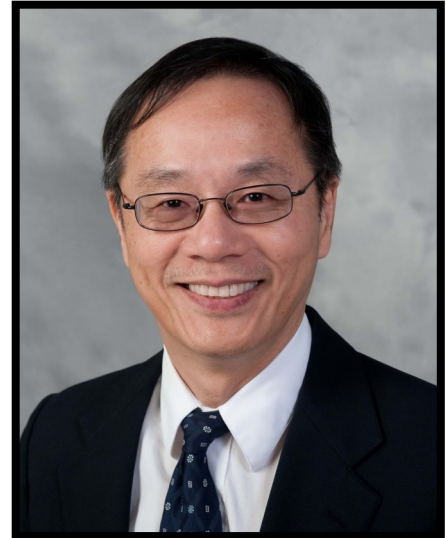
School of Aerospace Engineering

Georgia Institute of Technology

Monday, February 1st, 2016

3:00 pm

3151 Learned Hall



This seminar will provide an overview of combustion instabilities in four different types of propulsion systems (solid rocket, liquid rocket, gas turbine, and ramjet/scramjet engines). Emphasis will be placed on the present understanding of the processes involved, and contemporary research needs and challenges. Various research issues in acoustics, fluid mechanics, and chemistry related to oscillatory combustion in practical systems will be discussed. Both passive and active control techniques will be covered. Applications of contemporary numerical schemes, approximate analytical methods, and experimental diagnostic tools to combustion instability studies will be addressed.

About the speaker

Vigor Yang is the William R. T. Oakes Professor and Chair of the School of Aerospace Engineering at the Georgia Institute of Technology. He has received several publication and technical awards from the AIAA and ASME, including the Air-Breathing Propulsion Award (2005), the Pendray Aerospace Literature Award (2008), the Propellants and Combustion Award (2009), the Worcester Reed Warner Medal (2014), and JANNAF Interagency Propulsion Lifetime Achievement Award (2014). Dr. Yang was the editor-in-chief of the AIAA *Journal of Propulsion and Power* (2001-2009) and the the JANNAF *Journal of Propulsion and Energetics* (2009-2012). He is currently an editor of the Aerospace Book Series of the Cambridge University Press (2010-). A member of the U.S. National Academy of Engineering, Dr. Yang is a fellow of the AIAA, ASME, and Royal Aeronautic Society (RAeS).

