Computational Fluid Dynamic Simulation and Analysis in Support of Modern Air Vehicles Design

Speaker: Chunhua Sheng, Associate Professor in Mechanical Engineering

Abstract:

In this presentation, Dr. Sheng will present his research activities using Computational Fluid Dynamic tools to support the design and analysis of modern air vehicles, particularly for rotorcraft, propulsor/turbomachinery, and missile systems. Challenges and difficulties faced by modern CFD tools will be addressed, and plausible solutions to them suggested. Research topics will be covered for the development of highly efficient solution algorithms in all flow regimes, high-order unstructured grid schemes, hybrid coupling simulation, and fluid-structure interactions.

Short Bio:

Dr. Sheng earned his Ph.D. in Aerospace Engineering from Mississippi State University in 1994, and worked as an associate research professor at the High Performance Computing Collaboratory at Mississippi State University. Currently he is an associate professor in the Department of Mechanical, Industrial, and Manufacturing Engineering at The University of Toledo.