

Date: **Thursday, February 9, 2012, 12:00-12:50pm**

Location: **Hackerman Hall B-17**

Speaker: **Dr. David S. Stargel**, Program Manager
Air Force Office of Scientific Research



Directions and Challenges of the Multi-Scale Structural Mechanics and Prognosis Program of the Air Force Office of Scientific Research

The presentation will start with a historical perspective of the Air Force Office of Scientific Research (AFOSR) and the role it has played in funding and promoting fundamental basic research for the benefit of the Air Force and the US scientific community in general. Next, the presentation will offer a brief review of the current AFOSR organization and its research focus areas. Particular attention will be given to the field of Multi-Scale Structural Mechanics and Prognosis, its current directions and new challenges.

This fundamental basic research program addresses the US Air Force needs in the following application areas: 1) New and revolutionary flight structures, 2) Multi-scale modeling and prognosis and 3) Structural dynamics under non-stationary conditions and extreme environments.

The structural mechanics program encourages fundamental basic research that will generate understanding, models, analytical tools, numerical codes, and predictive methodologies validated by carefully conducted experiments. The program seeks to establish the fundamental understanding required to design and manufacture new aerospace materials and structures and to predict their performance and integrity based on mechanics principles.

The presentation is conceived as a dialog with the audience: the brief presentation from the author will be followed by an interactive questions and answers period.

About the Speaker

Dr. David S. Stargel is a program manager in the Aerospace, Chemical, and Material Sciences Directorate in the Air Force Office of Scientific Research (AFOSR), Arlington, Va. The office selects, sponsors, and manages research relevant to Air Force needs in science and technology, and is the single manager for the entire Air Force basic research program. Dr. Stargel earned his bachelor's degree in Civil Engineering from Florida A&M University in 1993. Upon graduation, he was selected for the USAF Palace Knight program and began his career with the United States Air Force in September of 1993. Dr. Stargel earned a doctorate in Mechanical Engineering from the University of Maryland at College Park in 2005.