

**State University of New York
Binghamton University
Materials Science & Engineering Program**

COLLOQUIUM

**Multifunctional Structural Nanotube Polymer Nanocomposites
for Aerospace Applications**

Cheol Park

*National Institute of Aerospace
Hampton, Virginia*

Multifunctional structural materials can offer a novel design paradigm for future aerospace vehicles and structures. Recent studies of nanotube-polymer nanocomposites indicate that these materials have the potential to provide the combination of structural integrity and sensing or actuation capability. Very small loadings of single wall carbon nanotubes in a polyimide matrix result in a sensor material in response to strain, stress, pressure, and temperature. These materials also exhibit significant actuation in response to applied electric fields. This presentation will highlight how to tailor the physical properties of the multifunctional nanocomposites and discuss their potential for multifunctional structural applications.

DATE: Thursday, February 12, 2009

TIME: 12:00 p.m.

PLACE: Student Services Wing, Room 305

ALL ARE INVITED