Unmanned Systems and the Military

Ubiquitous unmanned systems have the potential to radically change the nature of military operations (initially, since the military funds most of the research and development in this area) and a much broader range of human activity over time. Robots, dispersed smart sensors, and autonomous vehicles (in the air, in the water, on the water, and on the ground) provide the promise of taking over the “dirty, dull, and dangerous” tasks and releasing humans to do things that we are better suited for. To fully exploit this capability we must learn how to create machines that sense and understand the environment as well or better than humans can and operate in it autonomously, that are connected by self-forming, self-healing communication networks, that can collaborate as teammates with other autonomous systems and with humans, and lastly we will need to be able to process the massive amounts of data produced by dozens or hundreds of unmanned systems, mine the key bits and then provide that information to decision makers in a manner and at a time that will permit them to make timely, informed and rational decisions.

Discussion will be facilitated by Craig Woolsey, Assistant Department Head for Graduate Studies in Aerospace and Ocean Engineering, and Jon Greene, ICTAS Program Manager.

Background
In the NY Times best seller, “The Black Swan”, the author (Nassim Nicholas Taleb) defines a Black Swan as an event that has three characteristics: it is an outlier; it carries an extreme impact; it has retrospective predictability. He further makes a claim that our world is dominated by Black Swans. This seminar series will provide an environment in which engineers, scientists and humanists from different disciplines can come together to move beyond the predictable and incremental advances in the current technologies to the disruptive technologies of the future - a breeding ground for future Black Swans.

October 22, 2010, 2 p.m. to 4 p.m.
ICTAS Café X,
located just inside the foyer of the ICTAS Building on Stanger Street