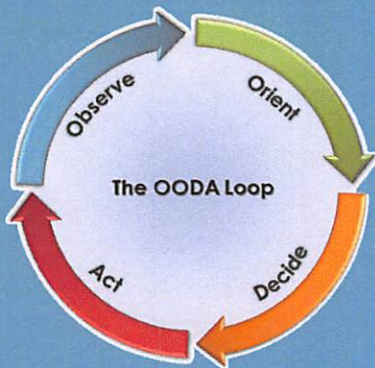




Department of Mathematics SPECIAL LECTURE

James M. Keiser, PhD

Applied Research Mathematician, National Security Agency,
& Technical Director, Laboratory for Analytic Sciences,
North Carolina State University, Raleigh, NC



Thursday

October 8, 2015

12:30pm-1:30pm

(Refreshments at 12:15pm)

Kraemer Family Library

3rd Floor Apse

Applied Mathematics and the Science of Analysis

Mathematics is the foundation upon which scientific advances are built. The ability to think abstractly, logically and by analogy is crucial to researching, developing and enabling new analytic capabilities, from both pure and applied perspectives, across a multitude of disciplines. One such emerging discipline is that of making sense of Big Data in the age of the Internet of Things. The goal of these analyses will enable decision makers to be quantitatively accurate and more effective in their jobs, thus creating Decision Advantage. These developments are requiring the development of new mathematical analysis, modeling and simulation techniques for the dual purposes of building Global Awareness and Strategic Foresight.

One of the primary goals of the Laboratory for Analytic Sciences (LAS) is to understand the Intelligence Analysis Process (IAP) in order to adapt and optimize it to better serve our users: including technical and mission researchers, as well as our customers, stakeholders, and policymakers. This requires developing new analytic frameworks to enable modeling, enhancing, and optimizing the IAP. These frameworks will form the foundation of the Science of Analysis in both the pure and applied domains. In the course of developing this new "calculus of analysis" we will be informed not only by the questions being asked, but also by the components and mathematical formalisms we develop at the LAS to analyze intelligence analysis. These formalisms will span the processes and flows of analysis, the representation of data, knowledge and intelligence, and the evolution of state and behavior.

This talk will discuss the diverse applied research activities at the LAS that are foundational to the Science of Analysis. We will cover topics ranging from undergraduate differential equations, to writing narratives and the OODA loop.

Interested in knowing what it's like to work for the NSA?

**Join speaker James Keiser for an information session about
NSA activities that involve Industry and Academia!**

DATE: Friday, October 9, 2015

TIME: 4:30pm

LOCATION: Math Center ENG 233

***Refreshments will be Served!**

