



$$(X - X_i)^T (X - X_i)$$

$$2\sigma^2$$

$$X = [x(t-9), x(t-8), \dots, x(t)]$$

$$X = [x(t-9), x(t-8), \dots, x(t)]$$

$$\exp\left[-\frac{(X - X_i)^T (X - X_i)}{2\sigma^2}\right]$$

## Prognostics “**Luminary**” and Plenary Session

Don't miss this opportunity to be **challenged** with prognostic paradigms and techniques from domains like **meteorology**, **economics**, and **decision science**.

4 keynote speakers, top quality refreshments, and a plenary session!

**WEDNESDAY**

**September 30<sup>th</sup>**

**8:00 a.m. – 11:45 a.m.**

The PHM Society is excited to announce a special “Luminary” Session on Prognostics as a keystone event for this year’s conference.

Four experts from radically different domains will **challenge your perspectives** on Prognosis and provide you with **new insight** on how to face the abundance of challenges in the PHM/CBM community. A never before seen compilation of Prognosticators representing the **Engineering, Meteorology, Decision Science, and Financial/Economic** domains will each give a keynote speech followed by an engaging Panel Session.

## Who will be presenting?

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Mr. Stephen Engel - Engineering

Dr. Mark E. Johnson - Meteorology / Climatology

Dr. Thomas R. Stewart - Decision Science / Psychology

Dr. Jerry Nickelsburg - Financial / Economic

## Schedule

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**Wednesday, September 30, 2009**

Duration: 8:00 a.m. - 11:45 p.m.

- 8:00-8:15:** Introduction
- 8:20-8:50:** Steve Engel - “PHM Engineering Perspectives, Challenges and ‘Crossing the Valley of Death’ ”
- 8:55-9:25:** Dr. Mark Johnson - “Hurricane Modeling, Tracking, and Damage Prediction”
- 9:25-9:40:** *Percolation Break*
- 9:40-10:10:** Dr. Thomas R. Stewart - “Psychological Factors in Improving Human Judgmental Forecasts”
- 10:15-10:45:** Dr. Jerry Nickelsburg - “Techniques and Challenges in Economic Forecasting”
- 10:45-11:00:** *Percolation Break*
- 11:00-11:45:** Plenary Session



## **Mr. Stephen Engel - Engineering**

Steve is an Associate Technical Fellow for the Aerospace Sector of the Northrop Grumman Corporation. For nearly 20 years, Mr. Engel has focused on diagnostics and prognostics design and development for military systems. He is presently coauthor of the model-based reasoning algorithm used for Prognostics Health Management (PHM) onboard the Joint Strike Fighter. He is also the technical lead responsible for the design of reasoning and prediction algorithms for DARPA's Structural Integrity Prognosis System. Mr. Engel holds a dozen patents in PHM, artificial intelligence paradigms and related technologies.

## **Dr. Mark E. Johnson - Meteorology / Climatology**

Mark E. Johnson is Professor of Statistics at the University of Central Florida in Orlando and has served on the Florida Commission on Hurricane Loss Projection Methodology. Professor Johnson is the author of Multivariate Statistical Simulation (Wiley) and has published in such journals as Risk Analysis, Bull. of the American Meteorological Society, Technometrics, J. of the Amer. Stat. Assoc., Biometrics, and J. of the Royal Stat. Soc.

## **Dr. Thomas R. Stewart - Decision Science / Policy**

Thomas R. Stewart is Director of the Center for Policy Research at Rockefeller College of Public Affairs and Policy, University at Albany. He received his Ph.D. in Quantitative Psychology from the University of Illinois and has worked at the Center for Research on Judgment and Policy, Institute of Cognitive Science at the University of Colorado, and at the National Center for Atmospheric Research. Dr. Stewart's research interest is in professional judgment under conditions of complexity and uncertainty. His research includes studies of physician and weather forecaster judgment.

## **Dr. Jerry Nickelsburg - Financial / Economic**

Jerry Nickelsburg is a senior economist at UCLA Anderson Forecast in which he plays a key role in the economic modeling and forecasting of California economies. He is a regular presenter at the Los Angeles Mayor's Economic Conference and has been cited in the Financial Times, New York Times, Los Angeles Times, Reuters, Variety, CNBC, NBC, PBS, and L.A. Business Journal. He received his Ph.D. in economics from the University of Minnesota in 1980 specializing in monetary economics and econometrics. He was formerly a professor of Economics at the University of Southern California and has held executive positions with McDonnell Douglas, Boeing as well as the Federal Reserve Board of Governors developing forecasting tools, and has advised banks, investors and financial institutions.