



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

$$2\sigma^2$$

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

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

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

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

Don't miss this opportunity to **expand your perspective on prognostic paradigms** and techniques at the 3rd annual Luminary Session on Prognostics. This year's speakers will touch upon **prognostic challenges in the Aerospace, Seismology and Epidemiology**. There will be 3 keynote speakers, top quality refreshments and a plenary session!!

**WEDNESDAY**

**September 28th**

**8:30a.m – 11:00a.m**

The PHM Society is excited to announce the 3rd annual “Luminary” Session on Prognostics as an anchor event for this year’s conference!

Three 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 compilation of Prognosticators representing the **Aerospace (Rotorcraft PBL), Seismology and Epidemiology** domains will each give a keynote speech followed by an engaging Panel Session.

## Who will be presenting?

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Mr. James Cycon – Aerospace (Sikorsky - Rotorcraft PBL)

Mr. Jim Berkland – Earthquake Prediction

Dr. Philip Polgreen – Prediction, Health and Infectious Diseases

## Schedule

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### Wednesday, September 28, 2011

Duration: 8:30 a.m. - 11:00 a.m.

**8:30-8:45:** Assembly & Introduction

**8:45-9:15:** Mr. James Cycon - “The Business of Prognostics – a Rotorcraft OEM Perspective”

**9:15-9:45:** Mr. James Berkland - “Looking Through Seismic Windows”

**9:45-10:00:** *Percolation Break*

**10:00-10:30:** Dr. Philip Polgreen - “Prediction, Health and Infectious Diseases”

**10:30-11:00:** Plenary Session

## **Mr. James Cycon - Engineering/Rotorcraft PBL**

Mr. Cycon is a Technical Fellow in Prognostics & Health Management for Sikorsky Aircraft Corporation, a United Technologies Corporation company. Mr. Cycon has over 30 years of helicopter experience at Sikorsky Aircraft Corporation. As a Technical Fellow, Jim is responsible for expanding Sikorsky's technical expertise in the area of Aircraft Health Management and Condition Based Maintenance. Jim's involvement in aircraft health management started in 2000 with Sikorsky's decision to make HUMS standard equipment on the S-92 helicopter. Jim started his career at Sikorsky Aircraft as a Rotor System Design Analyst in 1980, has a BS and MS from the University of Notre Dame and MBA from the University of New Haven. Jim holds 15 patents, has 12 publications, is a two time winner of Sikorsky's Al Albert Leadership award, and a winner of American Helicopter Society's Paul E. Haueter Award for a significant contribution to the development of non-helicopter VTOL aircraft.

## **Mr. Jim Berkland**

Mr. Berkland is a California Registered Geologist and Certified Engineering Geologist. He started his career as a Professor of Geology at Appalachian State University and then San Jose State University. He subsequently, spent 11 yrs with the U.S. Dept of the Interior (U.S.G.S, U.S.B.R.) and then 21 years as first County Geologist in Northern California (1973-94) Santa Clara County, CA. Mr. Berkland is the 21-year editor/publisher of monthly SYZYGY--An Earthquake Newsletter and he originated and developed theory of SEISMIC WINDOWS (8-day tidally-triggered, earthquake-prone periods). As detailed in the book THE MAN WHO PREDICTS EARTHQUAKES--Jim Berkland, Maverick Geologist (2006 by Cal Orey), Jim publically predicted all 23 mainshocks of 5+M in the S.F. Bay Area since 1973-2002 as well as the only 5+M quake since in Oct 30, 2007 which was in the top Seismic Window of that year. Jim is a 50-Year Fellow of Geological Soc. of America.

## **Dr. Philip Polgreen**

Dr. Polgreen M.D., M.P.H., is an associate professor of internal medicine and epidemiology at The University of Iowa. Dr. Polgreen's research is focused on understanding how infectious diseases spread, especially in healthcare settings. He and his collaborators focus on computational approaches to infection control including, for example, inferring and using social networks to understand how healthcare workers and patients move and interact. Along with Alberto Segre, in The University of Iowa's Department of Computer Science, Dr. Polgreen co-founded the Iowa Computational Epidemiology Group an interdisciplinary health research group that is using non-traditional data sources, technology, and analytical methods, especially data-driven computational methods to better understand, prevent, control, and treat disease. As part of the Iowa Computational Epidemiology Group he is working with collaborators in computer science to develop hardware and software for mobile computing devices to improve patient safety. Dr. Polgreen's other major research interest is in the field of information aggregation. He has pioneered the use of prediction markets and the use of internet search query logs (and other forms of social media) to help supplement disease surveillance efforts. He also runs the Infectious Disease Society of America's Emerging Infections Network. Dr. Polgreen's work has been funded by the Robert Wood Johnson Foundation, the Centers for Disease Control and Prevention and the National Institutes of Health.

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