



2013 Prognostics and System Health Management Conference, PHM-2013

September 8-11, 2013, Milan, Italy

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CALL FOR PAPERS

Structural Reliability Applications to PHM

For many engineering structures and systems, like pressure vessels, offshore oil platforms, pipelines, buildings, dams and bridges, failures are rare and not readily observable. Although failures are rare, the ongoing operation and safety management of such systems requires a predictive evaluation of failure probabilities. Structural reliability theory accounts for the model-based evaluation of failure probabilities of components and systems for which failures are rare and unlikely to be observable.

This includes mechanical models of the physics of failure, statistical models of the observable system parameters, plausibility or belief models of the unobservable system parameters and mathematical/probability theory models for evaluation of the non-observable (Bayesian) failure probabilities.

This special session aims at bringing together researchers, academics and practicing engineers concerned with various applications of structural reliability methods to prognosis and systems health management. Contributions are invited addressing both theoretical developments and practical applications in the following topics:

1. Structural reliability methods and applications;
2. Prognosis and health management using reliability methods;
3. Structural health monitoring, system identification, and damage detection;
4. Monte Carlo simulation;
5. Physics of failure modeling;
6. Life-cycle cost optimization under uncertainties;
7. Robust and reliability-based optimization;
8. Risk management and optimization;
9. Decision-making in presence of uncertainties;

Please submit your abstract through the conference website

<http://www.aidic.it/phm/abstractsubmission.html>

by selecting the proper topic (special session number 18)

Also, please send a copy by email to the organizer of this special session.

Organizer:

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Please submit your abstract by: October 23, 2012

