



2013 Prognostics and System Health Management Conference, PHM-2013

September 8-11, 2013, Milan, Italy

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CALL FOR PAPERS

Data driven PHM approaches – challenges when learning, applying, and validating the models

Data-driven PHM methods aim at transforming raw monitoring data into relevant information and behavior models, including the degradation of the system. These approaches are notably suitable when physics of failure is hard to be modeled, or in absence of prior knowledge or human experts. However, accuracy and usefulness of learned PHM models are closely related to availability and representativeness of data. Besides, it is hard to provide effective prognostics approaches, robust enough to tolerate uncertainty, and reliable enough to show acceptable performance under diverse conditions. In addition, the applicability of PHM approaches is also limited by industrial requirements such as the complexity of implementation, human choices like initial parametrization and features selection. Finally, accuracy, robustness, reliability and applicability of PHM are still open areas that need to be addressed. The aim of this session is to gather experts and provide a forum for researchers and practitioners to discuss intelligent approaches for PHM. The session will emphasize on challenges that follow from the steps of learning a model, identifying its limits and of validating PHM approaches. Topics of interest include, but are not limited to:

- Training approaches facing
 - Availability and representativeness of training data
 - Feature selection, separability and predictability
 - Uncertainty management
- Validation of approaches
 - Real-world implementations, applicability constraints
 - Accuracy, robustness, reliability of PHM approaches
 - Benchmarks

Please submit your abstract through the conference website by selecting the proper topic (special session number **25**): <http://www.aidic.it/phm/abstractsubmission.html>. Also, please send a copy by email to the organizers of this special session.

Organizers:

Rafael Gouriveau, Emmanuel Ramasso

FEMTO-ST Institute, France

rafael.gouriveau@femto-st.fr, emmanuel.ramasso@femto-st.fr

Please submit your abstract by: October 23, 2012