

PHMAP23 Organised session Proposal form

Session organiser (Affiliation):

Dr. Yongbo Li (Northwestern Polytechnical University), Dr. Zheng Liu (University of British Columbia), Dr. Khandaker Noman (Northwestern Polytechnical University)

Session title:

Information theory as an efficient tool for PHM of machineries

Theme and objective:

In order to perform the maintenance of large scale industrial sector prognosis of machine health has been receiving high amount of attention. This attention has been greatly reflected lately by the researches based on the application of information theories such as Shannon entropy and its variants, Lempel ziv complexity etc. for machine health prognosis. As statistical nonlinear measures, indices derived from information theory can be considered as efficient measures for developing and designing novel prognostic and health management techniques for machines.

Considering the aforementioned interest among the researchers, this special session aims to provide a platform to present high-quality original research on the latest developments of information theory and its application to the prognostic and health management of machineries.

Field:

Information theory; Data driven predictive maintenance; Fault diagnosis and prognosis; Condition monitoring; Complexity measure; Entropy theory

Tentative list of presenters (4 presenters per block):

Dr. Yongbo Li (Northwestern Polytechnical University, China)

Dr. Zheng Liu (University of British Columbia, Canada)

Dr. Khandaker Noman (Northwestern Polytechnical University, China) Dr. Tao Liu (Northwestern Polytechnical University, China)