

## **PHMAP23 Organised session Proposal form**

Session organiser (Affiliation):

Shashvat Prakash - Collins Aerospace

Session title: Operationalizing PHM for Airline Customers

Theme and objective:

As the airline industry becomes more familiar with the application of PHM concept to the management of their fleet, the method of operationalizing those concepts requires refinement. The purpose of this session is to present on four main topic areas that improve the ability of airline customers to take action on the prognostic alerts generated through a robust PHM tool.

The four topic areas proposed for this session are as follows:

- Prognostic Model Evaluation
- Fleet Monitoring as a means of Operationalizing PHM
- Enabling Methods including MLOps and Natural Language Processing
- Leveraging visualizations for Explainability

The first topic will start with a method for evaluating the performance of a prognostic model, this presentation will set a baseline for understanding what constitutes a well performing model. The next presentation will discuss translating PHM alerts to maintenance recommendations, highlighting best practices and lessons learned. The third topic will cover enabling methods such as MLOps for data management and natural language processing (NLP) for non-parametric data commonly found at airlines. Finally, the last topic will address visualization techniques to add to the explainability of PHM recommendations and help drive airline adoption.

Field: Aerospace Engineering

Tentative list of presenters (4 presenters per block):

Shashvat Prakash

Guru Saralaya

Chukwudera Mojekwu

Arman Haidari

Mikael Yemane