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Poster Sessions and Doctoral Symposium	Sivaneasan Bala Krishnan (SIT, Singapore)

We invite researchers, engineers, experts, and students interested in Prognostics and Health Management (PHM) to join us for **PHMAP 2025**. This conference will facilitate synergetic exchanges of ideas and practices between industrial and academic professionals. Esteemed global thought leaders will deliver high-quality presentations, and participants are encouraged to submit original research and technical contributions for poster presentations. Outstanding papers will have the opportunity to be published in EI and SCI indexed journals and be selected as Best Papers.

TOPICS OF INTEREST**PHM Theory and Methods:**

- Condition-based and Predictive Maintenance
- Explainable and trustworthy Detection, Diagnostics & Prognostics Methods
- Artificial Intelligence (including machine learning and deep learning)
- Data-driven, Model-based, and Hybrid methodologies for Modeling of Degradation
- Verification and Validation
- Physics-of-Failure
- Fault-Adaptive Control

PHM Design and Integration:

- Digital Twin and Digital Thread
- IoT for PHM cost-benefit and Return-on-investment analysis
- Failure Mode, Effects & Criticality Analysis
- Smart Manufacturing (Planning, Automation, Device, Sensor)
- Decision Support Systems
- Software and Hardware for PHM
- Standards for PHM

PHM and Emerging AI Applications:

- Large language models for Manufacturing
- Foundation models for manufacturing
- Emerging AI models (federated learning, self-supervised learning, continual learning, reinforcement learning, few-shot learning, etc.)
- Energy Systems (power plants, wind turbines, photovoltaics, etc.)
- Mobility and Transport (automobiles, rail, marine, etc.)
- Aerospace Systems (aviation, UAVs, rocket engines, artificial satellites, etc.)
- Process Industry (steel, chemical, glass, oil & gas, semiconductor, etc.)
- Electronic and Electrical Systems (semiconductors, batteries, substrates, solder, elevators, HVAC, automatic ticket gates, etc.)
- Structural Health Monitoring (bridges, roads, buildings, tunnels, etc.)
- Cyber Physical Systems (smart grids, autonomous vehicles, medical monitoring)
- Commercial Aviation and Maintenance Repair Organizations

PHMAP25

Asia Pacific Conference of the Prognostics and Health Management Society 2025

Dec 8-11, 2025

Singapore

<https://phmap25.org/>



KEYNOTE SPEAKER



Keynote:

Outlook of PHM Transformation with Recent Advances of LLM and Industrial Large Knowledge Model

Speaker:

Prof. Jay Lee, University of Maryland College Park



Keynote:

Intelligent PHM in the Big Data Era: A Collaborative Paradigm of Deep Learning and Physics

Speaker:

Prof. Ruqiang Yan, Xi'an Jiaotong University



Keynote:

Challenging Difficult Helicopter Gearbox Failure Modes via HUMS2023/2025 Data Challenges – with an overview of DSTG's Gear Diagnostics work and emerging challenges to Gearbox Diagnostics

Speaker:

Dr. Wenyi Wang, Defence Science and Technology Group, Australia

TECHNICAL TRACKS

- PHM for Commercial Airplanes/Aerospace Engineering
- Evolving Smart Manufacturing System by Design and Implementation of PHM
- Prognostic Discrimination under Uncertainty
- PHM Applications for Urban Infrastructure Resilience and Maintenance
- Advances in PHM for Tribology
- Autonomous Decision Making under Complex Conditions or Situations
- Smart Monitoring / Maintenance Operation
- Technologies and Methods for Achieving Zero Defect
- Manufacturing under Industry 4.0 / 5.0 PHM for Power Electronics/Systems/Battery
- RUL Prediction
- PHM for Device Monitoring/Turbines/ Motors
- Digital Twin for PHM
- Integrated Intelligent Health and Mission Management
- General AI for PHM

IMPORTANT DATES

- **Abstract submission:** Jan 15 – ~~Jun 30, 2025~~
July 15, 2025
- **Special session proposal:** May 01, 2025
- **Paper submission:** May 1 – Aug 15, 2025
- **Acceptance notification :** Sep 15, 2025
- **Pre-registration:** Sep 15, 2025
- **Camera ready submission:** Oct 30, 2025

Paper Submission link:

<https://phmap25.org/submission.html>

For any queries, please contact:

phmap2025.singapore@gmail.com

Proposals for Tutorials, Special Sessions, Doctoral Symposiums, and Data Challenges are invited for PHM Asia-Pacific 2025.

Abstract submission is optional. One can directly submit the full paper without abstract submission.