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SS-09: Prescriptive Maintenance

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Description

Prescriptive maintenance (RxM) is an advanced decision-making paradigm that recommends optimal actions to mitigate or prevent degradation and failures. By integrating prognostic predictions with operational constraints RxM provides context-aware solutions to enhance system Reliability, Availability, Maintainability, and Safety (RAMS), cost-effectiveness, and sustainability.

This special session aims to gather researchers and practitioners from academia and industry to discuss theoretical advancements, methodological approaches, and real-world applications of prescriptive maintenance in engineering systems.

Topics of Interest

Methods:

- Optimization under uncertainty
- Reinforcement learning
- Recommender algorithms
- Post-prognosis decision making
- Control theory
- Decision-support systems

Applications:

- Asset management
- Life-cycle optimization
- Operation and spare parts optimization
- Sustainability and circular economy
- Fleet management