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Artificial Intelligence—Robotics for Prognostics and Health Management (PHM)

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Message from the Guest Editors

This Special Issue aims to collect a variety of studies on robotics (and robotics) enhanced by AI in the field of PHM. Novel approaches in robotic inspection systems, robot perception for fault diagnosis, path planning and tracking for patrol inspection, and self-learning with AI for autonomous inspection schemes are welcome, as well as the smart design of inspection robots using AI-generative models. Theoretical contributions, model development, and performance improvements through technology fusion in the aforementioned fields are invited.

Topics of interest include (but are not limited to):

- Extreme robotics for PHM;
- Deep learning in grasping and manipulation for inspection robotics;
- Patrol and precise inspection with mobile robotics;
- Object detection, segmentation, and categorization;
- Path planning and tracking with reinforcement learning;
- Physical human–robot interaction;
- Generative design of inspection robots with AI;
- AI based object detection for fault diagnostics and autonomous inspection;
- Model-based control with deep neural network;
- Autonomous flight/driving with self-learning;
- Collision avoidance with novel sensors and AI.



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Special Issue



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Message from the Editor-in-Chief

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