

Special Issue

Advances in Remaining Useful Life (RUL) Prediction and Predictive Maintenance of Industrial Equipment

Message from the Guest Editors

The evolution toward Industry 4.0 has initiated a paradigm shift in industrial maintenance, moving from traditional reactive or scheduled interventions to data-driven predictive strategies. Central to this transformation is the ability to accurately predict the remaining useful life (RUL) of machinery, which stands as a cornerstone for optimizing operational efficiency, ensuring system reliability, and minimizing economic losses. This Special Issue seeks to collate seminal research and cutting-edge applications focused on RUL prediction for industrial equipment. We welcome high-quality submissions on novel machine learning and deep learning models, hybrid approaches that synergize physics-based principles with data-driven techniques, advanced methods for sensor data fusion, and compelling real-world case studies that demonstrate the tangible impact of predictive maintenance systems. By showcasing these advancements, this Issue aims to accelerate the deployment of intelligent health management systems across modern industries.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided. There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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