

Special Issue

Signal Processing and Machine Learning for Asset Management and Condition Monitoring

Message from the Guest Editors

Signal processing is a tool to capture, interpret and extract meaningful information from physical phenomena. Electrical power assets are usually overstrained and suffer from overaged conditions, including atmospheric instability. The electric equipment performance degrades over time. It requires effective evaluation of performance degradation to ensure long-term operations, avoid unplanned production downtime and maximize asset lifetime for greater resiliency. Asset management strategies support monitoring various parameters of the condition of those electric assets and also identify the primary degradation mechanisms, estimate the aging, predict the remaining useful lifetime, allow for optimal performance, reduce unplanned shutdowns and identify the causes of failures at early stages. Different machine learning and artificial intelligence methods are used for asset management and condition monitoring.

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Our primary goal is to encourage scientists and engineers to publish their theoretical results and developed methods in as much detail as possible. There is no limit to the maximum length of papers. Whenever possible, authors are encouraged to provide relevant data and developed code so that the results can be reproduced. Our goal is to provide a platform for scientists and engineers to share new approaches to signal processing in various application domains.

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