



Special Session on
***Advanced Signal Processing Methods for Early Fault Detection of Electric
Machines and Power Electronics Systems***

Special Session Organizers:

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Technical Outline of the Session and Topics:

The operation of most industrial applications is based on electric rotating machinery and its corresponding power electronics. In this context, such assets are exposed to the occurrence of degradations and faults that may lead to critical damages if their detection and identification are not performed in time.

This special session is focused on the discussion of novel condition-based monitoring approaches applied to electric machines and/or power electronics, developed under an early fault detection framework, dealing with faults at their earlier stage or the consideration of different fault severities. New proposals schemes for such early fault detection by means of high-resolution signal processing techniques (i.e., time, frequency and time-frequency domains) are considered in this Special Session.

The scope of this Special Session includes but is not limited to the topics below:

- High-resolution signal processing and sensing techniques for early fault detection
- Noise elimination, pattern recognition, feature extraction and classification methods
- Identification of fault severity and degradation levels
- Novel time, frequency and time-frequency signal processing approaches.

Submission of papers: deadline follows the deadline for the regular papers. All the instructions for paper submission are included in the conference website: <https://www.ieee-sdemped.org/>