



ANNUAL CONFERENCE OF THE IEEE INDUSTRIAL ELECTRONICS SOCIETY

Chicago | Illinois, November 3-6, 2024

Special Session on

Machine Learning for Industrial Process Condition Monitoring: Advances in Fault Diagnosis, Prognosis, Predictive Maintenance, Cyberphysical Security, and Privacy

Organized and co-chaired by:

Prof. Mohamed Benbouzid, University of Brest, Brest, France
Prof. Tarek Berghout, University of Batna2, Batna, Algeria
Prof. Yassine Amirat, ISEN Yncréa Ouest, Brest, France
Prof. Demba Diallo, University of Paris-Saclay, Paris, France

Mohamed.Benbouzid@univ-brest.fr
t.berghout@univ-batna2.dz
Yassine.Amirat@isen-ouest.yncrea.fr
Demba.Diallo@centralesupelec.fr

Call for Papers

Technical Outline of the Session and Topics:

In today's fast-changing industrial context, successfully implementing state-of-the-art technologies is vital to guarantee optimum performance, reliability, and security. In this context, building on its successful run at IECON 2022 and 2023, this special session aims to explore the latest developments in fault diagnosis, prognosis, predictive maintenance, security, and privacy within modern industries. From leveraging AI and machine learning for real-time fault detection to predictive analytics for proactive maintenance strategies, this session will explore innovative approaches for enhancing operational efficiency and minimizing industrial systems and process downtime. Additionally, this special session aims to broaden its scope to cybersecurity (cyberattack detection) and privacy considerations, addressing the critical need for safeguarding sensitive infrastructure and data in the era of interconnected systems.

Topics of the Session include, but are not limited to:

- Advanced fault diagnosis techniques.
- Prognostics and health management.
- Predictive maintenance strategies.
- Cybersecurity in industrial systems.
- Privacy-preserving techniques.
- Integration of fault diagnosis and predictive maintenance with security measures.
- Case studies and practical applications.
- Standards and best practices.
- Future trends and emerging technologies.

Author's schedule:

Deadline for submission of special session papers	April 15, 2024
Notification of acceptance	June 10, 2024
Deadline for submission of final manuscript	July 01, 2024

Early submission is highly encouraged for early decision notifications!



All the instructions for paper submission are included in the conference website:

www.iecon-2024.org