



**CALL FOR PAPERS  
SPECIAL SESSION ON**

**Digital Signal Processing and Artificial Intelligence for the diagnosis and prognosis of Rotating Machines  
for ICCAD'23  
May 10-12, 2023, Rome-Italy**

**Session Chair:**

- Pr. Jaouher BEN ALI, University of Tunis, ENSIT, Tunisia, benalijaouher@yahoo.fr.

**Session description:**

This special session deals with the problem of the diagnostic and prognostic for rotating machines. In fact, all rotating machines will degrade time. Nevertheless, their related failures are not only losses of production time; it can also have key harmful consequences.

Thus, in order to maintain critical industrial systems before the failure takes place, optimal maintenance strategies should be planned. Maintenance is an enabling discipline that aims at exploiting digital online collected monitoring data based on high advance sensor integration. Also, optimal artificial intelligence algorithms and advanced digital signal processing techniques are needed in order to enable relevant indicators and trends that depict the health of a system.

The goal is to aggregate the latest research efforts contributing to theoretical, methodological and technological advances in the integration of various aspects of diagnostic and prognostic of rotating systems applications within a broad range of disciplines. The main intention of this special issue is to present works dealing mainly (but not exclusively) with up-to-date solutions of acoustic and vibration signal processing, feature extraction and classification, health assessment and diagnosis, performance degradation prediction, remaining useful life estimation and dynamic maintenance decision making. Prospective authors are invited to submit high for this Special Issue.

The topics of interest include, but are not limited to:

- Data acquisition, processing, for diagnosis (or prognosis);
- Advanced health assessment and diagnosis strategies;
- Advanced prognostics for remaining useful life and performance degradation;
- Implementation of a diagnosis (or prognosis) systems for applications;
- Sound/Vibration based machinery diagnosis and prognosis;
- Acoustic emission based machinery diagnosis and prognosis;

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**SUBMISSION**

Papers must be submitted electronically for peer review by: **January 31, 2023**  
[Submission – ICCAD 2023 \(iccad-conf.com\)](http://iccad-conf.com)

All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).