



2020 IEEE INTERNATIONAL WORKSHOP ON Metrology for Industry 4.0 & IoT

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CNR - NATIONAL RESEARCH COUNCIL
HEADQUARTERS - **Piazzale Aldo Moro**

CALL FOR **PAPERS** for the Special Session on **TEMPERATURE AND VIBRATION MEASUREMENTS FOR PREDICTIVE MAINTENANCE AND IMPROVED RELIABILITY**


Temperature and Vibration measurements are the main parameters used to describe the state of machineries. Contact and Infra-Red temperature measurements are essential tools for ensuring the safety and the reliability of machineries and thermal imagers help the technicians in quickly identifying potential problems resulting in thermal machineries alterations. On the other side, vibration measurements are the probably the most diffused method for condition monitoring, and the paradigms of I4.0 (wireless sensors, machine learning, big data and cloud-based analyses) increase the potentialities of vibration-based measurement systems.

IoT systems based on grids of thermometers and MEMS accelerometers, connected to cloud systems with digital interfaces or via WiFi, tend to replace the classical monitoring systems based on few temperature measurement points and on a limited number of vibration pickups with analog output, posing new challenges in industrial metrology.

The special session will focus on metrological aspects and data analysis procedures of temperature and vibration measurements performed with IoT and traditional sensors. Authors are strongly encouraged to present works comparing the traditional condition monitoring approach with techniques based on I4.0 paradigms.

ORGANIZER

Marco Tarabini
Politecnico di Milano

 marco.tarabini@polimi.it



www.metroind40iot.org/special-session-13

info@metroind40iot.org



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