Important aspects of the grid modernization trend of the recent years are the management and state diagnostics of major pieces of T&D equipment that face new challenges. For example, Real-Time Thermal Ratings (RTTR) for large capacity overhead lines, transformers, and cables are considered essential for new and future installations. Non-invasive tests, ideally done on-line, to determine the condition of equipment would reduce faults, increase reliability, and reduce investment, operation and maintenance costs. There are currently technologies capable of performing some condition monitoring and assessment functions, but it is necessary to further develop them or propose new ones given the future expectations on power quality and reliability of the electric power system. The integration of distributed generation resources and possibly direct current circuits tied to the ac grid via power electronics devices may require different technologies for condition monitoring. Not only the condition of the electronic switches themselves needs to be assessed, but also the distinct insulation stresses produced by fast switching on power equipment needs to be evaluated.

This Special Section aims to promote research, innovation and exchange of information in the broad field of power equipment condition monitoring and assessment. Topics of interest include, but are not limited to:

- Innovations on dynamic rating of equipment
- Methods to monitor equipment ageing and estimate equipment remaining life
- Techniques for equipment health diagnosis and predictive maintenance
- Signatures and characteristics of equipment failures
- Data analytics based schemes for equipment condition monitoring
- Detection and location of equipment failures and incipient faults
- New developments in asset management techniques
- Integration of condition monitoring with power system operations
- Novel sensors and measurement systems for condition monitoring
- Sensor networks and Internet of Things for T&D equipment monitoring
- Application of communication and information technologies to condition monitoring
- Impact assessment on power grid planning based on condition monitoring
- Preventive prognostic condition monitoring of adverse states
- Economic effectiveness analysis of condition monitoring approaches
- Intelligent methods applied to condition monitoring

**SUBMISSION GUIDELINES**
This Special Section solicits original work that is not under consideration for publication in other venues. There is no need for the submission of an extended abstract. Please submit the full paper directly. Authors should refer to:

[http://sites.ieee.org/tpwrd/](http://sites.ieee.org/tpwrd/)

for information about requirements, formatting and the website of submission. When submitting, please select the submission type “Advances in Condition Monitoring and Assessment of Power Equipment”
Equipment” Any changes on deadlines or other updates related to this Special Section will be announced in the “Call for Paper & News” section of the above website.

**IMPORTANT DATES**
May 1, 2018: Call for papers issued
October 31, 2018: Deadline for submission of full papers (early submission is recommended)
April 30, 2019: Notification of final decisions
August 2019: Publication of Special Section

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