

# International Conference on Electrical Sciences and Technologies in Maghreb (CISTEM)

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Special Session on

## “Reliability Assessment of Electrical Power Systems”

Organized by

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**Special Session Submission Deadline: June 10, 2018**

**Submission via email to:** cistem2018@gmail.com, mboudour@ieee.org, rabah\_benabid@yahoo.fr

**Link:** [http://www.usthb.dz/CISTEM2018/sites/default/files/SS\\_CISTEM\\_18\\_proposal.pdf](http://www.usthb.dz/CISTEM2018/sites/default/files/SS_CISTEM_18_proposal.pdf)

## Call for Special Session Papers

The electrical power system reliability is strongly required for the industry development, human's life comfort and safety of industrial installations. Generally, the reliability of a system is defined as the probability that this system can perform its intended function for a specified interval under stated conditions. In practice, some critical industries such as in the field of petrochemical, electrical energy production and distribution and nuclear energy require high reliability level of their electrical systems. Therefore, the reliability of these systems must be continuously evaluated using the appropriate methods.

This proposed special session is concerned with methods development and application for modelling as well as quantitative and qualitative reliability assessment of electrical power systems. Topics of interest include (but not limited to):

- N-1 and N-2 Reliability Criteria
- Fault Tree Analysis Method
- Event Tree Analysis Method
- Reliability Block Diagram
- Monte Carlo Simulation
- Importance Factors (Fussel-Vesely, Risk Achievement Worth, SAIFI...etc.)
- Minimal Cut Set
- Markov Process
- Bayes Theorem
- Bayesian Network
- Common Cause Failures modelling
- Reliability models and data
- Sensitivity Analysis
- Uncertainty Analysis
- Failure Modes and Effects Analysis (FMEA)
- HAZard and OPerability (HAZOP)
- Reliability Assessment Software