CALL FOR PAPERS
SPECIAL SESSION ON
"Uncertainty modelling techniques in future power systems"
for CODIT'17
April 5-7, 2017 – Barcelona, Spain

Session Co-Chairs :

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Session description

This special session deals with the problem of **decision making under uncertainty techniques in operation and planning of future power systems.**

The methods and tools used in decision-making play a vital role in electric power system management. The objective and information available to each participant determines the best techniques that they should utilise when making decisions in investment, operation and planning. Furthermore, the interactions of each of these entities highly influence the overall outcome. Uncertainty is inherent in almost every aspect of power systems from technical parameters (demand fluctuation, renewable power generation, and generation/transmission/distribution outages), economic parameters (market price, interest rates, and economic growth rate), regulatory frameworks and technology development (smart grid, demand response, flexibility services). The sources of uncertainty are set to rise in future power systems with increased penetration of renewables, changes to market structures, disruptive technologies and increased demand-side participation. Future power systems will be equipped with even more ICT with an abundance of data sources to manage these changes. This data and the uncertainty of each source will require advances in methods able to efficiently deal with uncertainty. In order to have a secure, reliable, resilient and economically efficient power system we need new methods to deal with this uncertainty. This special issue intends to address the emerging concepts, methodologies and applications of decision making tools under uncertainty in future power systems. Topics of interest for this special issue include but are not limited to:

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- Information gap decision theory
- Fuzzy arithmetic
- Stochastic optimization
- Monte Carlo Simulation
- Point Estimate technique
- Robust optimization
- Z-numbers
- Risk modeling in presence of large scale renewable energy resources in transmission and distribution networks
- Uncertainty modeling in resiliency assessment/enhancement of power systems
- Uncertainty modeling in power system security evaluation and optimization
- Uncertainty modeling techniques in energy system integration
- Uncertainty modeling in power system security evaluation and optimization

SUBMISSION

Please submit your full paper choosing the right Special Session (**01-Special Session: Uncertainty modelling techniques in future power systems**) on the EasyChair for CoDIT'17 website:
https://easychair.org/conferences/?conf=codit17

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).

IIMPORTANT DATES

December 4, 2016: deadline for paper submission

February 2, 2017: notification of acceptance/reject

February 26, 2017: deadline for final paper and registration.