SPECIAL SESSION

RESILIENCE OF ELECTRICAL POWER AND ENERGY NETWORKS

Organized and chaired by: Prof. Payman Dehghanian, Electrical and Computer Engineering Dept., School of Engineering and Applied Sciences - George Washington University (USA) and Dr. Luigi Calcara, Astronautical, Electrical and Energy Engineering Dept. – University of Roma “La Sapienza” (Italy)

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Objective and topics: Unexpected extreme events ranging from cyber-security attacks, adverse weather conditions and other natural disasters, like earthquakes, landslides, and flooding, may be at the origin of human and environmental concerns potentially imposing serious risks to electric generation, transmission, and distribution systems. In proactive management of such risks and to assure a continuous, reliable and affordable supply of energy, power transmission and distribution system operators are continuously engaged in development and deployment of innovative technologies that can help ensure a higher resilience of their systems during such events.

The Special Session “Resilience of Electrical Power and Energy Networks” is devoted to electrical community, engineers and researchers, to present their state-of-the-art findings, research, and experiences in the field lying within, but not limited to, the following topics (low, medium and high voltages):

- Critical infrastructure resilience to extreme events;
- Structural and operational resilience of electrical networks;
- Metrics for quantification and techniques for evaluation of resilience in electrical systems;
- Effects of adverse weather conditions and other natural disasters on electrical systems;
- Cyber-security attacks and power grid resilience;
- Prevention, recovery and survivability of electrical systems in the face of extreme events;
- Innovations in drafting standards, construction guidelines, maintenance routines, inspection procedures, and recovery practices of electrical systems;
- Advances in design, planning, and operation of electrical systems for enriched resilience;
- Enhanced resilience through energy storage deployment and microgrids;
- Emergency response and early warning technologies for electrical resilience.

All the instructions for paper submission are included in the conference website: https://www.eeeic.net/eeeic/